



Maternal and Child Health Integrated Program

MCHIP/Egypt

Smart Choices for Healthy Living (Smart)

Baseline Analysis Report

Center for Development Services

November 2012

TABLE OF CONTENTS

Executive Summary	4
1. Introduction	8
1.1 Background	8
1.2 Project Objectives	8
1.3 Project Baseline assessment	9
1.4 Organization of the report	9
2. Baseline Design & Methodology	10
2.1 Baseline assessment components	10
2.2 Sample Design and Selection	12
2.3 Survey Instruments	14
2.4 Preparing and Training	15
2.5 Ethical Consideration	17
2.6 Data Collection and processing	17
3. Quantitative Survey results	19
Women Survey	19
3.1 Women Background Characteristics	19
3.2 Contraception	21
3.3 Maternal Health	30
3.4 Child Health	61
3.5 Breastfeeding Practices and Nutrition Status	74
3.6 Working Status of Women and Decision Making	79
Men Quantitative Survey	80
3.7 Exposure of men to Media Messages about Family Planning	80
3.8 Knowledge of men of Family Planning	80
3.9 Role of Men During pregnancy	82
3.10 Knowledge of men Dealing with Sick Child	83
4. Qualitative Assessment	84
LOWER EGYPT	84
4.1 Sharqyia Governorate	84
4.2 Qalyobia Governorate	93
UPPER EGYPT	104
4.3 Beni-Suef	104
4.4 Asyut Governorate	113

4.5 Sohag Governorate	123
4.6 Qena Governorate.....	130
4.7 Qualitative Survey RESULTS SUMMARY	140
5. Health Facility Assessment Survey	143
5.1 Facility Assessment.....	143
5.2 Workers Assessment	145
5.3 Pharmacy Staff In-Depth-Interview	160
5.4 Health Facility Synopsis.....	164
6. Baseline Survey Conclusion.....	169
6.1 Background Characteristics.....	169
6.2 Contraception	169
6.3 Antenatal Care	169
6.4 Delivery Care	170
6.5 Postnatal Care.....	171
6.6 Child Health	172
6.7 Breastfeeding Practices and Nutrition Status	172
6.8 Working Status of Women and Decision Making.....	173
6.9 MEN	173

EXECUTIVE SUMMARY

The Safe Motherhood Applied Research and Training (SMART) is an operations research project designed to develop and test interventions to reduce maternal and neonatal mortality using community-based strategies and approaches. Smart focuses on parts of six governorates (Qalyobia, Sharqyia, Asyut, Beni-Suef, Qena, and Sohag). Activities are implemented on two preselected districts within each governorate.

Center for Development Services (CDS) was consulted to conduct a baseline and an end-line survey in the Smart/MCHIP targeted districts in Egypt. The main goal of the baseline survey is to evaluate the current situation in the areas identified and serve as a base for measuring the improvement in knowledge, behaviors, quality of service, division of gender roles and services accessibility by the end of the project implementation. The baseline assessment is composed of three components; a health quantitative survey; a community level qualitative assessment and a health facility assessment survey.

The health quantitative survey was conducted using 5 different survey questionnaires and targeted 12,152 respondents from all ever-married women and men with a child of age less than two years, divided into 6,076 from Upper Egypt and 6,076 from Lower Egypt each including both intervention and control districts. The qualitative assessment targeted women and men with a child of age less than two years as well as mothers-in-law with a grandchild less than two years old. A total of 36 FGDs were conducted in the six governorates for a deeper understanding of the underlying causes and consequences of actions taken regarding the mother's and child's health. The Health Facility Assessment targeted 25 Community Development Associations (CDAs) based health facilities selected randomly from the intervention districts. Within each facility, three surveys were applied; a facility assessment checklist, two community health workers assessment surveys in addition to a doctor/physician interview and the facility manager interview. The following provides a summary of the key conclusions of the three components:-

Quantitative survey – women

Only half of the women completed 11 years of education. Relatively; the women with more education know more about the contraceptives. Almost all women (99.5%) have knowledge of at least one contraceptive method and 70% use currently modern contraceptives. Intra Uterine Devices (IUDs) are the main used contraception and the decision of using contraception is mainly joint decision between the couples (75%). Slightly less than one fifth of the women in the sample don't know any kind of the associated health risks to closely spaced pregnancy and 60% stated that women can get pregnant within two to five years after last birth.

Almost all women (99.2%) received Antenatal Care (ANC) and 79.9% of them received it in the private sector. More than three quarters of the women who received ANC, had four antenatal visits or more. Younger women are more likely to have more ANC visits than older women. The higher the education level of the woman, they tend to have more antenatal visits. First ANC visit occurred before the fourth month of pregnancy in 77.1% of all cases. Women of age 20-24 (81.5%) and completed some secondary education or more (82.2%) tend to have

their checkup earlier compared with other women. 71% of all women took iron tablets or syrup among which 50% had taken them for about a month or less. 40.6% received two or more TT injections during pregnancy. The higher the education level and the younger the age, women tend to take iron tablets and receive TT injections. 10.2% of women stated that they don't know about any pregnancy complications.

Private sector is the main delivery place with 54.7% followed by general hospitals with 30.8%. Fewer women tend to deliver at home (11.7%) or use primary healthcare units (2.2%). 45.5% of the women in Upper Egypt delivered last baby in the hospitals compared to 21.2% delivered in the hospitals in Lower Egypt. About 63.8% stated that place of delivery was her own decision while 48.5% stated that it was the decision of the husband. Women who had no ANC visits tend to stick to their husbands decision more than other women. Factors influencing the choice of place of delivery are; level of the care provided during the ANC (47.9%), the opinions of trusted doctors (18.9%) and financial considerations. 85.8% of the deliveries were assisted by a doctor. One fifth of surveyed women did not know any delivery complications. Complications knowledge is directly proportionate to age and education. Slightly above half of the women that didn't have ANC do not know about any complication during delivery. Among women who knew, heavy bleeding was the highest cited complication (51.8%), followed by high fever (26.1%). 13.8% of all women don't know any of the complications women may encounter after delivery. Highest cited complications were: severe abdominal pain 45% and excessive vaginal bleeding 44.6%. Older women tend to be more knowledgeable than younger about postnatal complications. Women who delivered at a public facility had the highest level of knowledge compared with those who delivered at private facilities, hospitals or home.

Only one fifth of the women confirmed receiving injections after delivery to prevent bleeding too much. 56.5% assured on having a manual removal of placenta and 47.7% confirmed having their uterus massaged for contractions. Women delivered at hospitals or homes were more likely to have manual removal of placenta and uterus massage for contractions compared with those delivered at public or private facility, with public facilities having the least levels.

About 67% of women confirmed receiving their first postnatal checkup after hours from delivery. 10.8% of women did not have any postnatal care. The vast majority of all women (81.3%) do not know the instrument used in cutting the umbilical cord. Only 13.6% confirmed using brand new instruments. Women with some secondary education or more were more likely not to know what instrument was used in cutting the umbilical cord compared to others of less education. 25% of women who delivered at a public facility mentioned putting cow dung on the cut cord. 62.8% of women mentioned putting antiseptic or clamp (3.8%).

7.6% of women stated that they do not know any newborn illness. Among those who know, yellow palms/soles/eyes was the highly listed sign (65.7%), followed by swollen abdomen (26.1%), fever (25.9%), and coldness (16.8%). Women of age less than 20 are less likely to know about the signs of newborn illness (11.6%) compared with women of other ages. 62.3% of children suffered from the symptoms of ARI during the two-week period prior to the survey. Among them, 44.2% were given medical treatment by health providers. Children ages 6 – 23 months were most likely to receive medical care (about 49%). 50.3% were reported as having had diarrhea in the two week period prior to the survey. Only 4.2% of children ill with diarrhea hadn't received any treatment. Children whose mothers are uneducated are more

likely to be treated with pills or syrup NOT zinc (10.0%). Among children with diarrhea: 41.7% were breastfed as usual and 43.4% offered more food than usual.

In terms of personal hygiene; 91.3% of all respondents wash their hands before food preparation, 85.9% wash their hands before feeding children and 79.8% wash their hands after defecation. 60.1% of children who are stunted have normal weights. Among children who are not stunted, 84.6% are neither wasted nor overweight/obese, and 10.8% are wasted. Stunted children of age 18-23 are more likely to be of normal weight (66.7%) than younger children. Finally; the vast majority of women (87.9%) stated that they are not working outside home. Money decision is taken by the husband alone in 41.1%. 32.4% stated that the decision is taken jointly by her and the husband.

Quantitative survey – Men

Television is the main source of information (96.5%), followed by the radio (33.3%), then newspaper (25.9%). 98.4% of men confirmed their hearing about family planning methods, mostly pills (97.6%), IUD (95.8%), and injectables (93.6%) with much less knowledge about traditional methods. Exactly 89.3% of men confirmed having ANC visits; among which 65.4% had been with their wives during these visits. 76.0% of men reported that their children were delivered at a hospital. Men don't have good knowledge on how to deal with their sick child. 45% of men did not know what kind of fluids required for sick child with diarrhea. 19.6% think that child should be given same amount of liquid as usual.

Qualitative Assessment

Most contraceptive methods were identified by mothers and mothers-in-law but fathers identified IUD and contraceptive pills mainly. The perceived ideal number of children per family is higher in Upper Egypt than in Lower Egypt. The reasons for using contraceptives were financial reasons to provide more care for the children and for mother to maintain a healthy living.

Primary Health care units are considered to be of low quality services. Mothers tend to go to the private sector in Lower Egypt and to general hospital in Upper Egypt for ANC and delivery. The availability and the quality of services provided in addition to the financial factor are all considered when choosing healthcare providers. Almost all participants from different groups reported they should go only when they have a problem but they were not sure about the number of visits. Danger signs of pregnancy were well known but not the need or the dose of iron tablets. None of the FGDs participants in Lower Egypt reported home delivery. However, some mothers and mothers-in-law in Upper Egypt mentioned home delivery if midwife was trusted and experienced (Asyut and Beni-Suef). Fathers were more involved in the decision of delivery place.

All participants agreed that they care less about postpartum care in comparison to ANC and delivery. Almost half attendees did not receive after delivery care. Mothers depend on their own when it comes to postpartum care while fathers and mothers in law have little knowledge.

Jaundice and care of umbilical button were the most important health issues raised by interviewees. Mothers were identified as the sole caregiver for the baby after birth. Breast feeding and soft food and Oral Rehydration Syrup are the most commonly used lines of

treatment. ORS is less valued by the mothers in Upper Egypt. Participants aware of symptoms of common flu, but they couldn't identify the differences between pneumonia and common flu. Reasons for respiratory tract infection were exposure to cold and smoke. Fathers usually smoke indoors with their children around.

In terms of breast feeding; Mothers and Mothers-in-law are aware of the importance of colostrum, its immunity impact on newborns and how long does it last. Fathers tend to signify colostrum importance. In addition to breastfeeding; Herbs, sugar and solid food are frequently given in the first 6 months. Breast bumping isn't common belief or practice among the interviewees. Very few participants could identify the growth development chart. All the groups agreed that medical consultation is a must when faced with any wasting problems. Mothers were able to identify appropriate food given after 6 months; however financial factors play a role in determination of nutrition.

Health Facility Assessment

Almost all health facility assessed are underequipped and understaffed. Almost 25% of health facilities were still underconstruction or non functioning. Health workers mostly did not have medical education or training. Pharmacies are sources of information especially in child health problems. The interviews with the health services providers showed weak knowledge and medical skills of the workers.

1. INTRODUCTION

1.1 BACKGROUND

The Safe Motherhood Applied Research and Training (SMART) is an operations research project designed to develop and test interventions to reduce maternal and neonatal mortality. The Maternal and Child Health Integrated Program's (MCHIP) focuses on accelerating the reduction of maternal, newborn, and child mortality; by increasing the use of high impact Maternal, Newborn, and Child Health (MNCH) interventions that address the major causes of death among mothers, newborns and children under five. MCHIP also addresses the underlying causes of maternal and child mortality including high fertility rates and malnutrition and barriers affecting access to and use of services including gender-specific barriers.

1.2 PROJECT OBJECTIVES

The Smart Choices for Healthy Living (Smart)'s aim is to ensure that communities are able to utilize community-based strategies and approaches to improve maternal and child health, neonatal health, and nutrition issues, including birth-spacing. Smart activity recognizes that good health is a shared responsibility and thus provides citizens with the basic information and skills to improve maternal and child health practices and outcomes. Hence, the Smart program design is evidence-based, and builds communities' capabilities to take charge of their own health by empowering them with the information and skills they need to achieve their health goals.

Project activities focus on addressing gaps in maternal, neonatal and child health indicators, improving childhood nutrition and decreasing neonatal deaths. Smart will build on the 1,000 day critical window of opportunity, from conception through age two, in which proven nutrition interventions can dramatically improve a child's chances of surviving and living a healthy and prosperous life. These interventions include increasing the intake of vitamins and minerals for mothers and babies, good infant and young child feeding and caring practices, and the use of therapeutic foods for very malnourished children. Improving nutrition has long-lasting positive effects and can help break the cycle of poverty. Ensuring better nutrition for mothers and children can help lay the foundation for a future in which the next generation grows up to lead significant and sustainable progress in their communities and countries.

As for the newborn care, there is a lack of focus on the newborn health problems. Hence, little is known about the causes of neonatal deaths because there is no newborn surveillance system. Newborn care has been fragmented through a variety of programs, and the major causes of neonatal death are preventable or treatable with simple, cost-effective interventions. Most of early childhood deaths in Egypt take place before a child's first birthday, with more than half occurring during the first month of life. Although there has been progress in breastfeeding practices, there still exist opportunities to strengthen this proven practice to enhance child survival. With sufficient focus on immediate and exclusive breastfeeding, further improvements in neonatal survival and child health and nutrition can be achieved.

To improve the cost-effectiveness of private sector health care, Smart will work through community development associations (CDAs) to improve the quality of care in the neglected areas of newborn health and Infant and Young Child Nutrition (IYCN). Family planning and maternal health and nutrition also are focus areas because both affect newborn health and IYCN.

1.3 PROJECT BASELINE ASSESSMENT

MCHIP received funding from USAID in Egypt to implement the Smart activities in Lower and Upper Egypt over the next two years, with key outcomes focused on neglected areas of newborn health and survival and the nutritional status of children. The main aim is to conduct a baseline and an endline survey in Smart/MCHIP targeted districts in Egypt. The main goal of the baseline survey is to evaluate the current situation in the areas identified to have the project activities being implemented. The results of the baseline survey will serve as a base for measuring the improvement in knowledge, behaviors, quality of service, and division of gender roles and services accessibility by the end of the project implementation. The baseline survey also may help in identifying the opportunities for and constraints on implementing the project. An endline will then be implemented after one year to measure the effects of the Smart interventions on household behaviors and targeted health services. The overall purpose of the two surveys is to obtain information on key indicators that Smart proposes to change as a result of Smart interventions. The baseline survey is the subject matter of this report.

The baseline assessment is composed of three components; a health quantitative survey; a community level qualitative assessment and a health facility assessment survey. Those three components assess the following objectives:

- The availability as well as the quality of the maternal, neonatal and child health and nutrition services provided by the private and community based clinics, in terms of MNH-FP nutrition services.
- Mothers' knowledge and behaviors, including utilization of MNH-FP nutrition services to protect the health of their children.
- The capacity and past experience/results achieved of 12 umbrella CDAs in developing and implementing MNH-FP nutrition activities in their communities, especially awareness programs to reduce stunting and newborn deaths.
- The knowledge and behaviors of women and mothers about danger signs in mothers and newborns and causes of stunting and neonatal mortality.
- Understand roles of men and mothers-in-law in decision making for MNH-FP and Nutrition.
- The awareness of the community with the roles of gender in improving MNH-FP nutrition outcome.

1.4 ORGANIZATION OF THE REPORT

The MCHIP baseline survey report is organized in six chapters: After the Introduction, chapter 2 provides a detailed outline of the design and methodology of the three baseline components. Chapter 3, 4 and 5 presents the results of the three baseline research components and finally chapter 6 presents the main conclusions.

2. BASELINE DESIGN & METHODOLOGY

2.1 BASELINE ASSESSMENT COMPONENTS

MCHIP has received funding from USAID in Egypt to implement the Smart activities in Lower and Upper Egypt over the next two years, with key outcomes focused on neglected areas of newborn health and survival and the nutritional status of children. The main aim is to conduct a baseline and an endline survey in Smart/MCHIP targeted districts in Egypt. The main goal of the baseline survey is to evaluate the current situation in the areas identified to have the project activities being implemented. The results of the baseline survey will serve as a base for measuring the improvement in knowledge, behaviors, quality of service, and division of gender roles and services accessibility by the end of the project implementation. The baseline survey also may help in identifying the opportunities for and constraints on implementing the project. An endline will then be implemented after one year to measure the effects of the Smart interventions on household behaviors and targeted health services. The overall purpose of the two surveys is to obtain information on key indicators that Smart proposes to change as a result of Smart interventions. The baseline survey is the subject matter of this report.

The baseline assessment is composed of three components; a health quantitative survey; a community level qualitative assessment and a health facility assessment survey. Those three components assess the following objectives:

- The availability as well as the quality of the maternal, neonatal and child health and nutrition services provided by the private and community based clinics, in terms of MNH-FP nutrition services.
- Mothers' knowledge and behaviors, including utilization of MNH-FP nutrition services to protect the health of their children.
- The capacity and past experience/results achieved of 12 umbrella CDAs in developing and implementing MNH-FP nutrition activities in their communities, especially awareness programs to reduce stunting and newborn deaths.
- The knowledge and behaviors of women and mothers about danger signs in mothers and newborns and causes of stunting and neonatal mortality.
- Understand roles of men and mothers-in-law in decision making for MNH-FP and Nutrition.
- The awareness of the community with the roles of gender in improving MNH-FP nutrition outcome.

Smart focuses on parts of six governorates that are selected based on the:

- Malnutrition rates
- Poverty rates
- Lower health indicators (CPR, antenatal care, birth spacing, teenage pregnancy, deliveries by skilled providers, availability of antenatal care and maternal mortality).

In addition, the implemented activities are built on previous investments made by USAID/Egypt through Community for Healthy Living (CHL) and Takamol Projects in these governorates. The targeted governorates are Qalyobia, Sharqyia, Asyut, Beni-Suef, Qena, and Sohag. Activities are implemented on two preselected districts within each governorate. Since this is a baseline study that helps identifying the opportunities for and constrains on implementing the project, another district is selected from each of the targeted governorates to act as a control district. This aims to obtain an enhanced evaluation for the project achievements in the intervention districts. Hence, a total of 18 districts are targeted for the study; two interventions and one control from each governorate. Table 1.1 presents the intervention and control districts selected in the study.

Smart project activities directly engage 8.6% (2.04 million of the 23.8 million) of the people living in the targeted six governorates. The project targets 530,849 women in the reproductive age, including 57,168 pregnant women. Additionally it targets 112,295 children of age under 2 and 51,043 newborns. It should be noted that the intervention is not targeting 100% of all districts within the selected governorates (the range is 25% - 100%). The population coverage estimates are based on calculations of the number of mother villages that can be effectively managed by a lead/umbrella CDA in a 12 month period. The targeted area within these districts is equivalent to population of 10 – 12 mother villages.

Table 2.1: Targeted Districts and Governorates

Name of selected districts in the six targeted governorates		
Governorates	Districts	
	Intervention	Control
Qalyobia	El-Qanater Kafr Shukr	Toukh
Sharqyia	Abu Hammad Belbeis	Abu Kabir
Asyut	Asyut El-Fateh	Abu Tig
Beni-Suef	Beni-Suef El-Fashn	Ahnaseya
Qena	Qous Naqada	Qift
Sohag	Sohag El-Maragha	Tama

2.2 SAMPLE DESIGN AND SELECTION

2.2.1 Health Quantitative Survey

The health quantitative survey consists of a women and a men survey. The women survey was administered over all ever-married women in the age group 15-49 years with a child of age less than two years, while the men survey administered over all ever-married men with a child of age less than two years. To permit estimating of the main indicators accurately, a total sample of about 6,120 ever-married women with a child of age less than two years, and 6,120 ever-married men with a child of age less than two years were recommended. Thus, a total sample size of 12,240 eligible women and men was expected to be interviewed during the survey. The sampling error associated with this sample size can be calculated using Cochran equation as follow:

$$E = \sqrt{\frac{Z^2 p(1-p)D^2}{n}},$$

where E is the sampling error (level of precision), Z is the value from the standard normal table corresponding to the desired confidence level, n is the sample size, p is the estimated proportion of an attribute that is present in the population, and D is the design effect, which is a comprehensive summary measure of the effect on sampling error of the sampling design used. Given p=0.5 (maximum variability), n=6,120, D=2, and 95% confidence level, then the resulting sampling error is

$$E = \sqrt{\frac{1.96^2 \times 0.5 \times (1-0.5) \times 4}{6120}} = 0.025.$$

This means that with a level of confidence of 95% and a sample size of 6,120, the sampling error will not exceed 2.5% above or below the study estimates. This level of sampling error is scientifically acceptable.

The sample of the health quantitative survey was a multistage random sample consisting of two stages. In the first stage, the MCHIP selected villages from the intervention and control districts in each of the six governorates. The majority of these villages were of small sizes, where each was considered as a cluster. Large sized villages were divided into number of clusters, ranges from 2 to 5 clusters based on the village size. Hence, the second stage included randomly drawing a sample of 51 women and 51 men from each cluster. Eligible respondents included the ever- married women in the reproductive age (15-49 years) with a child of age less than two years, and the ever-married men with a child of age less than two years. Table 2.2 summarizes the outcome of the fieldwork for the health quantitative survey, by place of residence. The table shows that in each of Upper Egypt and Lower Egypt governorates, a total of 3,060 eligible women were identified in the sample selected for the women survey; 1,530 from the intervention districts and 1,530 from the control districts. As shown in the table, almost all questionnaires were completed. Of the women selected from Upper Egypt governorates, 1,529 were successfully interviewed in control districts, and 1,530 were successfully interviewed in intervention districts, each with response rate of almost

100%. In Lower Egypt, 1,528 were successfully interviewed in control districts with response rate of almost 100%, and 1,518 were successfully interviewed in intervention districts with a response rate of 99.2%. As for the men survey, a total of 3,060 eligible men were identified in the sample selected from each of Upper Egypt and Lower Egypt governorates; 1,530 from intervention districts and 1,530 from control districts. However, the response rates among men selected in the sample were slightly lower than that of women. Of the men selected from Upper Egypt governorates, 1,512 were successfully interviewed in control districts with response rate 98.8%, and 1,503 were successfully interviewed in intervention districts with response rate 98.2%. In Lower Egypt, 1,512 were successfully interviewed in control districts with response rate of almost 98.8%, and 1,498 were successfully interviewed in intervention districts with a response rate of 97.6%.

Table 2.2: Results of women and men with a child less than 24 months interviewed
Number of women interviewed and response rates, according to residence

Result	Upper Egypt		Lower Egypt	
	Control	Intervention	Control	Intervention
Interviews with women age				
Less than 20	6.1	5.8	6.8	4.9
20-24	31.2	31.9	35.0	36.3
25-34	46.2	47.5	47.1	49.5
35+	11.4	10.1	7.3	5.6
DK/Missing	5.0	4.7	3.8	3.8
Number of eligible women identified	1,530	1,530	1,530	1,530
Number of eligible women interviewed				
<i>Completed</i>	1,529	1,530	1,528	1,518
<i>Partly Completed</i>	0	0	1	1
<i>Total</i>	1,529	1,530	1,529	1,519
Eligible women response rate	99.9	100.0	99.9	99.2
Number of eligible men identified	1,530	1,530	1,530	1,530
Number of eligible men interviewed				
<i>Completed</i>	1,512	1,503	1,512	1,498
<i>Partly Completed</i>	1	0	2	1
<i>Incapacitated</i>	1	0	0	0
<i>Total</i>	1,514	1,503	1,514	1,499
Eligible men response rate	98.8	98.2	98.8	97.9

2.2.2 Health Qualitative Survey

The qualitative survey targeted women and men with a child of age less than two years. It also targeted mothers-in-law with a grandchild less than two years old. The survey used Focus Group Discussions (FGDs) with targeted groups in intervention areas as a platform to have a deeper understanding of the underlying causes and consequences of actions taken regarding the mother's and child's health. Six FGDs were held in each governorate; two with women, two with men and two with mothers-in-law. Each FGD was held with 8 to 15 participants from the local community. Women, men and mother-in-law participating were not interviewed in the qualitative part of this survey. Table 2.3 summarizes the outcome of the fieldwork for the health qualitative survey, by place of residence.

Table 2.3: Results of women and men with a child less than 24 months participated in FGDs

Result	Upper Egypt		Lower Egypt	
	Control	Intervention	Control	Intervention
FGD with women	0	8	0	4
FGD with men	0	8	0	4
FGD with mothers-in-law	0	8	0	4
<i>Completed</i>	0	24	0	12
<i>Partly Completed</i>	0	0	0	0
<i>0</i>	1	0	0	0
<i>Total</i>	0	24	0	12

2.2.3 Health Facility Assessment Survey

The health facility assessment survey targeted 25 Community Development Associations (CDAs) based health facilities selected randomly from the intervention districts. Within each facility, two surveys were applied; a facility assessment checklist through an interview with the facility managing doctor and two community health workers assessment surveys. Also, the doctor/physician interview assessed the training he/she received and technical assistance provided to her. The community health workers assessment survey was applied for evaluating the knowledge and behaviors of the facility workers towards prenatal, postnatal, and newborn care. At least two workers were randomly selected from each facility and were interviewed. Twenty five health facility assessments were conducted and due to unavailability issues, only thirteen doctors/physicians, and twenty six community health workers were successfully interviewed. Also an In-Depth-Interview (IDI) was conducted with two pharmacy staff members per governorate. The IDIs were applied to get a deeper understanding of the role of pharmacies and how far the pharmacy staff impact the knowledge and practices of women and men regarding Maternal and Child Health issues. A total of 12 pharmacy staff member were interviewed.

2.3 SURVEY INSTRUMENTS

The instruments used in the quantitative component of the baseline survey were five main questionnaires: one for women, one for men, a check-listed assessment of health facilities, one for the doctor/physician and one for assessing health facilities' community health workers. In addition, the instruments used in the qualitative component of the baseline survey were three sets of questions used during the FGDs; one with the mothers, one with the fathers and one with the mothers-in-law. Another set of questions were used in the IDI with the pharmacy staff as part of the health facility assessment.

The quantitative health survey questionnaires (of men and women) generally cover the areas of:

- Current levels of coverage on MNH-FP-Nutrition key indicators.
- Knowledge and practice of women with a child less than 2 years on MNH-FP-Nutrition behaviors.
- Assess men's and women's decision making on MNH-FP-Nutrition issues and use of services.

The health facility assessment survey questionnaires mainly cover the areas of:

- a) Assessment of Quality of service delivery and the extent to which the MNH-FP and Nutrition services are being delivered.
- b) Knowledge, skills and practices related to MNH-FP and Nutrition services of various cadres of health workers dealing with specific areas.
- c) Utilization of health services.
- d) Assessment of community opinions and attitudes regarding the health services (antenatal care, delivery services, sick child, well baby, FP, etc), and community involvement with development of the health system.
- e) Assessment of community health activities, including CHWs.

The qualitative health survey questionnaires (of men, women and mothers-in-law) generally cover the areas of:

- a) Capture their perspectives towards gender roles in food distribution, nutrition and health-seeking decision-making.
- b) Behaviors in regards to infant feeding practices and iron-folic acid supplementation.
- c) Capture issues and barriers that lead to inequities in health outcomes.
- d) Mothers-in-law participation in MNH-FP-Nutrition interventions.
- e) Other issues, such as, levels of community awareness, collective efficacy/ community capacity (i.e. community involvement, ownership and action to solve problems') service availability, capacity of private clinic and quality of provided services.

A pre-test was carried out prior to survey implementation in two governorates; Beni-Suef and Qalyobia. A total of 12 quantitative health survey questionnaires (6 women and 6 men) were completed in each governorate. In Qalyobia, one check-listed health facility assessment survey, one doctor/physician interview and two community health workers questionnaires were conducted. In Beni-Suef, due to unavailability, only one check-listed health facility assessment survey was conducted, A final version of all quantitative tools were prepared based on the pre-test results.

2.4 PREPARING AND TRAINING

2.4.1 Field Research Team Recruitment

For the quantitative household survey the field researchers were divided based on the outcome of the random sampling of the clusters. Accordingly, one team per governorate in Upper Egypt and two teams per governorate in Lower Egypt, a total of eight survey teams were recruited. Each research team consisted of ten researchers (7 female researchers and 3 male researchers) and each team surveyed one cluster per day. The field researchers were recruited from the target governorates in order to facilitate the understanding of the local community, dialect and customs. For the qualitative assessment, a team of experienced CDS facilitators led and documented the FGDs with mothers, fathers and mothers-in-law.

For the Health Facility Assessment, two highly qualified physicians and four assistants (2 each) were recruited.. Each Facility Assessment team consisted of one medical specialist and two local surveyors to conduct the interviews with the community health workers.

Over the duration of the baseline assessment, 90 people were recruited; 80 for the household survey (including district leaders), 4 quantitative team leaders, 2 physicians for the Facilities Assessment and 4 researchers to assist the health facility assessors.

2.4.2 Training of Supervisors, Researchers and Assessors

A total of four training workshops were held through which all field supervisors, researchers and assessors were trained. The following training was conducted:

Table 2.4 Training conducted in preparation of the baseline data collection

Training Title	Number of Days	Participants	Number of Trainees	Place
Supervisors Training Workshop	2	Team Leaders District Leaders Health Facility Assessors	12	CDS Office
Lower Egypt Researchers Training Workshop	3	Team Leaders District Leaders House Hold Survey Researchers	42	CDS Office
Health Facility Assessment Training Workshop	2	Health Facility Assessors Health Facility Assessors' Assistants'	6	CDS Office
Upper Egypt Researchers Training Workshop	3	Team Leaders District Leaders House Hold Survey Researchers	42	Asyut University

During the workshops, the following objectives were achieved for the research teams:

- Increasing awareness concerning the themes of the study
- Orientation about research objectives and methodology of the work
- Discussing the research tools and their suitability to the study objectives and study design
- Training on interviewing and data gathering
- Training data collectors on:
 - How to communicate with target parents and family members, CDA staff and health care providers and how to gain their confidence to ensure their approval to participate in the study;
 - How to ask questions and fill the questionnaire sheet; and
 - How to conduct focus group discussions

2.4.3 Community Mobilization

Before the start of the field data collection, CDS sensitized community gatekeepers through conducting a “DAWAR”, a village leadership meeting with a CDS staff member which was facilitated by the UCDA and SMART regional teams. A total of 19 DAWARS were held; eleven in intervention groups and 8 in control groups.

2.5 ETHICAL CONSIDERATION

Surveys were designed based on justice, respect for persons and beneficence. Several informed consents were developed; one for the mothers, one for fathers, one for healthcare workers and one for facility assessment to make sure that participants fully understand what is the survey about, what are their direct and indirect benefits and what are the risks that they may be subjected to during the survey including emotional distress. A documented voluntary approval by the participants was a prerequisite to interview them. This documentation was either obtained by the signature of the participants on the informed consent or by a signature of a third party (witness) in case if the participant is illiterate. An approval by the Egyptian Society for Healthcare Development (ESHCD)'s Institutional Review Board (IRB) was obtained prior to the data collection. In addition researchers were trained on research ethics by the Chairperson of the IRB. All the surveys for the quantitative survey and the notes from focus group discussion were saved with sole accessibility by the principle investigators.

2.6 DATA COLLECTION AND PROCESSING

During the survey the field data collection was by four field supervisors, two in the Upper Egypt intervention group and two in the Lower Egypt intervention group. Also in each team one senior field researcher was recruited as a district leader. This maintained close solid supervision of each team.

For quality control and assurance of the field survey was as follows

- 1- District leader reviewed all questionnaires completed by all researchers on a daily basis to make sure that there were no unjustifiable blanks or errors.
- 2- Team leaders reviewed 5% of the questionnaires collected on a daily basis to check for unjustifiable blanks or errors. They also re-interviewed 1% of the interviewees on a daily basis and compared the prefilled questionnaire.
- 3- The fieldwork coordinator from CDS office periodically visited the teams and performs spot checks in all stages.
- 4- Throughout the fieldwork close communications was maintained between office and fieldwork teams.
- 5- The completed questionnaires were reviewed twice. The supervisor in the field reviewed the completed questionnaires and gave his/her comments directly to the interviewer(s).

The completed questionnaires was sent from the field as soon as possible, and then reviewed by the data entry officers. At the beginning of the field research a report was provided to the field supervisors of issues noted in the filled questionnaires in order for the field supervisor to provide feedback for the field teams.

For the quantitative survey, questionnaires were reviewed and then coded for consistency and completeness by data office editors. In the first few days of the field work, a report was prepared by the office editors based on their editing. This report was reviewed by the CDS senior staff and sent to the field teams to avoid the problems, if any, in the future.

The data entry started in parallel to the office editing while the interviewing teams were still in the field. The data from the questionnaires were entered and edited on microcomputers using the Statistical Package for the Social Science software (SPSS). Verification and consistency checks were done in order to be sure about the quality and accuracy of the data. Verification was carried out by re-keying 100% of questionnaires. A total of four PC computers were used for data entry and re-entry using four data entry personals. The data entry and re-entry took around 30 days.

For the qualitative survey, a coding scheme was developed to capture and process data, transcripts from the FGDs were translated and turned into a narrative form to capture what women, men, mother-in-law and pharmacy staff have shared. The findings were divided into themes based on the most common repeated findings. Quotes of the interviewees were used to clarify and support the themes of the scheduled interviews with the interviewees.

3. QUANTITATIVE SURVEY RESULTS

WOMEN SURVEY

The women survey eligible respondents are those in the reproductive age (15-49) with a child of age less than two years. The survey focused on the respondents' knowledge and practices in areas related to maternal and newborn care, child nutrition, neonatal/children health, decision making, and family planning/reproductive health. This chapter is devoted for presenting the women survey results.

3.1 WOMEN BACKGROUND CHARACTERISTICS

Of the basic background characteristics of women in the sample are the age and the years of education. Table 3.1 presents the percent distribution of eligible women according to the highest level of schooling attended or completed, by the age and place of residence. As shown in the table, the majority of women in the sample are concentrated in the age categories (20-24) and (25-34). The vast majority of women at those ages, 71.5% and 67.3% respectively, had spent ten or more years in education, i.e., completed some secondary education or more. Exactly half of these women had completed 11 years of education or less. As for women of age less than 20 or greater than 35 years old, less than half of each had achieved this level of education; 46.0% and 44.7%, respectively. Exactly half of women of age less than 20 had completed nine years of education or less, and exactly half of women of age 35 or more had completed eight years of education or less. It should be noticed that slightly more than quarter of the women of age 35 years old or more had never been educated, representing the second highest frequency in this category of age.

Women that had never been educated and emphasized on their ability to read letters were asked to read a certain given sentence. As shown in Table 3.1, only 5.2% and 4.4% of women of age (20-24) and (25-34), respectively were able to read the whole sentence, while none of the women of age less than 20 was able to read it.

Table 3.1: Educational attainment

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics

Background characteristic	Highest level of schooling					Median years completed	No education but can read a whole sentence	Number of women
	No education	Primary or some primary (1 - <=9)	Some secondary or more (10+)	DK/Missing	Total			
Women Age								
Less than 20	13.9	37.4	46.0	2.8	100.0	9.0	0.0	361
20-24	8.4	15.3	71.5	4.9	100.0	11.0	5.2	2051
25-34	13.9	14.2	67.3	4.5	100.0	11.0	4.4	2906
35+	26.0	22.1	44.7	7.2	100.0	8.0	1.5	526
DK/Missing	53.6	16.3	15.2	14.8	100.0	0.0	0.0	263
Region by intervention								
Upper Egypt								
Intervention	15.0	23.3	56.8	4.8	100.0	11.0	2.2	1530
Control	18.0	18.3	61.3	2.4	100.0	11.0	0.4	1529
p-values	0.000							
Lower Egypt								
Intervention	9.6	12.2	66.8	11.3	100.0	11.0	11.0	1519
Control	16.6	12.8	68.1	2.4	100.0	11.0	2.8	1529
p-values	0.000							
Total	14.8	16.7	63.3	5.2	100.0	11.0	3.2	6107

According to place of residence, exactly half of women in Lower and Upper Egypt had completed 11 years of education or less, as shown in Table 3.1. In each of Lower and Upper Egypt, there is a significant difference between intervention and control districts in the percent distribution of women according to the highest level of schooling attended or completed. In Upper Egypt, the percent of women that had completed some secondary education or more in the control districts is significantly higher than those in the intervention districts; 61.3% versus 56.8%, respectively. Both districts almost have the same percent of women that had never been educated; 18.0% in control districts and 15.0% in intervention districts. In Lower Egypt however, the percent of women completed some primary education or more are almost the same in the control and intervention districts. However, the percent of women with no education at all in control districts is significantly higher than those in the intervention districts; 16.6% versus 9.6%, respectively.

Intervention districts in Upper and Lower Egypt had shown significantly higher percent of women that had never been educated but has the ability to read a whole sentence. As shown in Table 3.1, about 2.2% of uneducated women in intervention districts in Upper Egypt were able to read a whole sentence versus only 0.4% in control districts. In Lower Egypt however, the difference was way remarkable as 11.0% of these women in the intervention districts had read a whole sentence versus only 2.8% in the control districts.

3.2 CONTRACEPTION

Contraception plays an important role in saving women's lives. It helps prevent unwanted pregnancies that often put women at high risk from pregnancy-related complications. This section presents the women survey results relating to the knowledge of the health risks women and/or children may encounter when not considering child-spacing, knowledge of contraceptive methods, current use of contraceptive methods, and participation in contraception decisions.

3.2.1 Knowledge of Health Risks Associated with Close Pregnancy

Women were first asked about the optimal time a woman should wait after the birth of her last child before getting pregnant again. About 60% stated that women can get pregnant again within two to five years after last birth, and 27.5% stated that they can get pregnant within a period of at most two years, as shown in Table 3.2A. These opinions didn't significantly differ among different ages, education levels, or place of residence. However, it was noticed that the majority of women who are pregnant now (50.8%) and those who are not sure of being pregnant (52.0%) think that the optimal period is of at most two years, while the majority of women who are not pregnant now (61.7%) think that the optimal period is around two to five years after last birth.

Table 3.2A: Knowledge of waiting time between pregnancies

Background characteristic	Knowledge of how long should a woman wait after birth of a child before getting pregnant					Number of women
	Less than 2 years	2 to 5 years	More than 5 year	Don't know	Total	
Age						
Less than 20	33.1	53.5	7.2	6.1	100.0	359
20-24	27.5	61.1	5.6	5.8	100.0	2033
25-34	26.6	60.3	7.2	5.9	100.0	2873
35+	26.3	62.8	6.9	4.0	100.0	521
DK/Missing	31.8	56.3	6.1	5.7	100.0	261
Region by intervention						
Upper Egypt						
Intervention	29.7	61.7	3.9	4.6	100.0	1521
Comparison	25.2	64.7	6.5	3.6	100.0	1521
<i>p-values</i>	0.000					
Lower Egypt						
Intervention	29.1	56.7	6.1	8.1	100.0	1485
Comparison	25.9	57.6	9.9	6.6	100.0	1520
<i>p-values</i>	0.000					
Education						
No education	30.4	55.5	7.2	6.9	100.0	899
Primary or some primary (1- <=9)	29.0	60.4	6.0	4.6	100.0	1009
Some secondary or more (10+)	25.8	61.5	7.0	5.7	100.0	3828
DK/Missing	34.7	57.2	1.6	6.4	100.0	311
Current pregnancy Status						
Yes	50.8	42.4	1.6	5.2	100.0	427
No	25.6	61.7	6.9	5.8	100.0	5556
Unsure	52.0	48.0	0.0	0.0	100.0	25
Missing						39
Total	27.5	60.2	6.6	5.7	100.0	6047

Women were asked about their knowledge of the health risks that a woman and her child may encounter when getting pregnant too soon after her last birth. Based on the results in Table 3.2B, slightly less than one fifth of the women in the sample don't know any kind of the associated health risks. Among women with knowledge of these health risks, the majority (56.7%) agreed that getting pregnant too soon after the last birth can lead the mother to be suffering from anemia, followed by those who agreed that this may lead the child to be born too small (36.7%).

Differentials by Selected Background Characteristics

Table 3.2B presents differentials in the levels of knowledge of the health risks associated with getting pregnant too soon after the last birth on the woman and her child by some selected background characteristics; namely the age and education level. As it could be noticed, there is almost no significant difference between different ages in their level of knowledge of these health risks, with the opinion that mother can suffer from anemia having the highest percentage of agreement followed by the possibility of birthing a too small child.

Among different education levels, slightly above one fifth of uneducated women (22.2%) and slightly above one quarter of women who completed primary or some primary education (26.8%) do not know any information about the health risks a woman or her child may encounter when getting pregnant so soon after last birth. However, as the education level gets higher to be completed some secondary education or more, this percent decreases to 15.5%, as shown in Table 3.2B.

Differentials by Place of Residence

Table 3.2B also presents differentials in the levels of knowledge of the health risks associated with getting pregnant too soon after last birth by place of residence. In general, women in Lower Egypt are more likely to know about the health risks than those in Upper Egypt. In addition, mainly the women in Upper Egypt added that C-Section Risks and Complications are considered from the health risks associated when not considering child spacing.

In Upper Egypt, women in control districts have significantly higher knowledge of the health risks women and child may encounter when getting pregnant so soon after last birth than women in intervention districts. For example, about one fifth of women in control districts have no information about these health risks, compared with around one quarter of women in intervention districts. Among women with knowledge of these risks, women in control districts were more likely to see that these risks include that the baby will be born too small (39.8%) and too early (7.7%), and that mother can suffer from anemia (58.1%), compared with (33.0%), (5.3%), and (51.9%), respectively in intervention districts.

In Lower Egypt, there is no significant difference between the level of knowledge between control and intervention districts. Women in control districts were more likely to say that getting pregnant so soon after birth leads the child to be born too small (40.6%) and too early (11.6%), and the mother to suffer from C-section risks and complications (18.2%). On the other hand, women in intervention districts were more likely to say that getting pregnant so soon after birth may lead to the death of the mother (11.2%).

Differentials by Child-Spacing Opinion

As shown in Table 3.2B, the less the number of years women think it is suitable for spacing between successive births, the more the percent of not knowing the associated health risks is. Around 19% of women who think that a period of five years or less should be waited after birth to become pregnant again don't know the associated health risk, while this percent decreases to 10% when their opinion is that this period should be more than five years. In addition, there is a significant difference between those who see that few years of spacing is ideal and those who thinks that many years of spacing is ideal in terms of the types of health risks they know. For example, 62.2% of those who think waiting for more than 5 years is ideal, see that getting pregnant so soon after birth will lead the baby to be born too small, compared with only 27.8% of those who think waiting for less than 2 years is ideal and 39.2% of those who think waiting for 2-5 years is ideal.

Table 3.2B: Knowledge of Health risks of getting pregnant too soon after the birth of a child for the women and child

Background characteristic	Health Risks								Number of women have any knowledge of health risks	Number of women
	Don't Know	Percentage of women with any knowledge of health risks	Baby Born Too Small	Baby Born Too Early	Mother Can Die	Mother Can Have Miscarriage	Mother Can Suffer Anemia	C-Section Risks and Complications		
Women Age										
Less than 20	20.6	79.4	35.7	7.7	4.9	12.9	60.5	21.3	286	360
20-24	19.3	80.7	37.0	7.7	8.1	18.8	56.0	21.5	1642	2035
25-34	17.1	82.9	36.5	7.9	7.5	18.6	55.9	22.9	2394	2888
35+	19.3	80.7	40.0	9.1	8.2	17.0	59.0	22.5	417	517
DK/Missing	24.2	75.8	31.0	8.1	6.1	14.2	60.9	20.8	197	260
Region by intervention										
Upper Egypt										
Intervention	24.9	75.1	33.0	5.3	6.3	16.3	51.9	30.8	1141	1520
Comparison	20.7	79.3	39.8	7.7	5.2	14.6	58.1	29.7	1210	1526
p-values	0.005	0.005	0.001	0.021	0.251	0.262	0.002	0.564		
Lower Egypt										
Intervention	15.4	84.6	32.9	6.7	11.2	22.0	58.6	11.6	1263	1493
Comparison	13.1	86.9	40.6	11.6	7.3	18.8	57.6	18.2	1322	1521
p-values	0.068	0.0068	0.000	0.000	0.000	0.045	0.624	0.000		
Education										
No education	22.2	77.8	33.1	10.0	8.4	17.3	55.1	23.1	700	900
Primary or some primary (1-<=9)	26.8	73.2	32.4	5.2	8.1	19.4	54.2	25.6	743	1015
Some secondary or more (10+)	15.5	84.5	38.8	8.3	7.0	17.8	57.2	22.1	3237	3832
DK/Missing	18.2	81.8	32.0	5.5	10.9	19.5	60.5	11.7	256	313
Opinion on child spacing										
Less than 2 years	18.6	81.4	27.8	6.6	8.1	16.5	58.1	22.7	1350	1658
2-5 years	19.2	80.8	39.2	5.7	6.8	20.6	54.3	24.7	2928	3625
More than 5 years	10.0	90.0	62.2	23.9	8.6	12.2	60.3	10.8	360	400
DK	22.0	78.0	22.2	18.1	11.1	5.9	70.4	8.9	270	346
Missing									28	31
Women planning for next child										
Within 2 years	21.4	78.6	28.2	6.1	8.3	23.1	51.9	24.5	624	794
More than 2 years	18.9	81.1	42.4	5.9	8.5	18.2	58.3	21.9	1912	2358
From now	15.5	84.5	25.6	9.6	3.2	16.8	60.0	19.2	125	148
Don't want more children	16.4	83.6	35.8	10.8	7.0	16.2	56.2	21.0	1886	2257
Missing									389	503
Total	18.5	81.5	36.7	8.0	7.6	18.0	56.7	22.2	4936	6060



3.2.2 Knowledge of Contraceptive Methods

Awareness of family planning methods is crucial in deciding whether to use a contraceptive method and which method to use. Family planning programs typically aim to raise the awareness about the importance of family planning, and employ a variety of channels to promote family planning, including mass media. The women survey collected data on knowledge of five modern methods (contraceptive pill, Intra-Uterine Device IUD, contraceptive injectables, male condoms, and Lactation Amenorrhea Method LAM) and two traditional methods (safe period rhythm, and male withdrawal method). In addition, provision was made in the questionnaire to record other methods that respondents mentioned spontaneously.

Data has shown that almost all sampled women (99.5%) have knowledge of at least one contraceptive method, specifically modern methods. On average, a woman knows from two to three methods. However, the percent of women that had heard of at least one traditional method didn't exceed 1%. The majority of women had mainly heard of IUD (92.0%), followed by pills (88.2%) and Injectables (81.1%), as shown in Table 3.3. About 8.4% of respondents have added the contraceptive implants as a contraceptive method.

Differentials by Selected Background Characteristics

Table 3.3 presents differentials in the levels of knowledge of at least one contraceptive method by some selected background characteristics; namely age and education level. Based on the sample results, older women have higher level of knowledge of contraceptive methods, especially those of age 35 years or more. In addition, about 11.0% of women of this age have added the implant method, representing the highest percent among other ages. As for younger women, there is no significant difference between their knowledge of the different types of contraceptive methods. Based on the education level, there is a significant difference between educated and uneducated women in their level of knowledge of contraceptive methods. However, educated women with different levels of education almost have the same level of knowledge. For example, about 89.1% of women with primary or some primary education and 89.5% of those with some secondary education or more had heard of pills, while 84.2% of those with no education had heard of it. Women with primary or some primary education were the ones with the highest knowledge of the newly added method-the contraceptive implant (11.2%).

Table 3.3: Knowledge of contraceptive methods by background characteristics

Percentage of women age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern/traditional method, by background characteristics

Background characteristic	Any method	Any modern method	Pill	IUD	Modern method				Traditional method			No method	Mean Number of Methods known	Number of women
					Inject-ables	Im-plants	Male condom	LAM*	Any tradi-tional method	Rhythm	With-drawal			
Women Age														
Less than 20	100.0	100.0	89.9	92.8	79.9	5.7	0.0	1.1	0.6	0.0	0.6	0.0	2.70	348
20-24	99.6	99.6	88.4	91.3	80.2	8.0	2.5	2.7	0.9	0.6	0.5	0.4	2.73	1993
25-34	99.4	99.4	87.7	92.3	81.3	8.5	3.5	2.3	0.5	0.4	0.2	0.6	2.75	2828
35+	99.8	99.8	92.0	94.9	85.3	11.0	6.8	3.1	0.6	0.2	0.6	0.2	2.93	512
DK/Missing	97.6	97.6	81.6	87.7	77.9	7.8	2.5	2.5	0.0	0.0	0.0	2.4	2.54	250
Region by intervention														
Upper Egypt														
Intervention	99.6	99.6	89.4	93.0	80.3	12.8	3.7	2.0	0.3	0.2	0.1	0.4	2.80	1483
Control	99.7	99.7	92.4	92.6	88.3	13.9	2.2	2.4	0.3	0.2	0.3	0.3	2.91	1485
p-values	0.524	0.524	0.005	0.684	0.000	0.373	0.021	0.538	0.998	0.997	0.411	0.524		
Lower Egypt														
Intervention	98.8	98.8	81.2	90.4	72.2	1.2	4.5	3.1	0.9	0.6	0.5	1.2	2.51	1473
Control	99.8	99.8	89.6	92.0	83.3	5.4	2.4	2.3	0.8	0.5	0.5	0.2	2.76	1490
p-values	0.000	0.000	0.000	0.121	0.000	0.000	0.002	0.176	0.818	0.773	0.828	0.000		
Education														
No education	99.4	99.4	84.2	89.3	81.1	7.4	2.3	2.5	0.3	0.2	0.2	0.6	2.66	873
Primary or some primary (1-<=9)	99.7	99.7	89.1	93.0	83.6	11.2	2.0	2.6	0.5	0.1	0.4	0.3	2.81	998
Some secondary or more (10+)	99.5	99.5	89.5	92.6	81.4	8.3	3.6	2.4	0.7	0.5	0.4	0.5	2.77	3752
DK/Missing	98.1	98.1	79.8	89.7	68.2	2.6	5.0	2.6	0.3	0.0	0.3	1.9	2.44	308
Total	99.5	99.5	88.2	92.0	81.1	8.4	3.2	2.4	0.6	0.4	0.4	0.5	2.75	5931

*In the DHS, LAM (natural breastfeeding) was treated as a traditional method, while in this table it was treated as a modern method

Differentials by Place of Residence

Generally, respondents in Upper Egypt have higher knowledge of contraceptive methods than those in Lower Egypt, as shown in Table 3.3. The IUD was the most frequently listed method in every residential category, followed by the pills and injectables. A reasonable percent of women in Upper Egypt added the implant method (12.8% in intervention districts and 13.9% in control districts), which was not the case in Lower Egypt (only 1.2% in intervention districts and 5.4% in control districts).

Within Upper Egypt, there is a significant difference between the intervention districts and control districts only in the percent of women who have heard of pills, injectables, and male condom. Women in control districts were more likely to have heard of pills and injectables than those in intervention districts; (92.4% versus 89.4%) and (88.3% versus 80.3%), respectively.

Within Lower Egypt, there is a significant difference between the intervention districts and control districts in the percent of women who have heard of pills, injectables, implants, and male condom. Except for the male condom, women in control districts were more likely to have heard of these other three methods than those in intervention districts; (89.6% versus 81.2%), (83.3% versus 72.2%), and (5.4% versus 1.2%), respectively.

3.2.3 Current use of Contraceptive Methods

The women survey asked the eligible respondents about current use of contraceptive methods. Overall, Table 3.4 indicates that 70.1% of women are using contraception, with 70.1% using modern methods and none using traditional methods. The most widely used methods are IUD, pills, and injectables. Almost 46.1% of women are currently using IUD, followed by the pills (36.4%) and then injectables (15.6%). Small proportions of women are using other modern methods, with 2.4% currently using implant, and 1.1% using lactational amenorrhea method (LAM).

Table 3.4: Current use of contraception by background characteristics

Percent distribution of women age 15-49 by contraceptive method currently used, according to background characteristics

Background characteristic	Any method	Modern method							Traditional method				No method	Number of women
		Any modern method	Methods Unsuitable for Breastfeeding Women				Methods Suitable for Breastfeeding women		Any traditional method	Natural Breastfeeding	Rhythm	Withdr awal		
			Pill	Inject ables	Implant s	Foamin g Tablets & Creams	IUD	Male condom						
Women Age														
Less than 20	63.8	62.6	42.9	13.7	4.0	0.0	40.7	0.0	0.0	0.0	0.0	0.0	36.2	359
20-24	69.2	67.0	35.2	12.3	2.0	0.1	50.9	0.0	0.9	0.9	0.0	0.0	30.8	2036
25-34	71.5	69.6	37.1	16.5	2.7	0.0	44.2	0.1	1.4	1.4	0.0	0.0	28.5	2892
35+	70.8	69.0	35.1	21.0	1.1	0.0	42.8	0.5	1.4	1.4	0.0	0.0	29.2	521
DK/Missing	69.1	68.4	33.3	22.2	1.7	0.0	44.4	0.0	1.1	1.1	0.0	0.0	30.9	262
Region by intervention														
Upper Egypt														
Intervention	64.8	62.9	37.7	16.8	2.1	0.0	44.0	0.2	1.2	1.2	0.0	0.0	35.2	1524
Comparison	66.8	65.3	44.2	14.5	2.1	0.0	38.4	0.0	1.9	1.9	0.0	0.0	33.2	1527
<i>p-values</i>	0.236	0.478	0.003	0.166	0.981	1.000	0.012	0.091	0.238	0.247	1.000	1.000	0.236	
Lower Egypt														
Intervention	76.6	73.8	30.5	14.3	2.9	0.2	53.4	0.2	0.4	0.4	0.0	0.0	23.4	1496
Comparison	72.5	71.0	34.2	16.9	2.3	0.0	47.6	0.0	1.1	1.1	0.0	0.0	27.5	1523
<i>p-values</i>	0.009	0.429	0.060	0.095	0.334	0.099	0.006	0.099	0.071	0.075	1.000	1.000	0.009	
Education														
No education	66.9	65.0	32.9	21.7	2.3	0.0	43.0	0.0	2.2	2.2	0.0	0.0	33.1	902
Primary or some primary (1-<=9)	68.8	66.8	35.2	17.2	2.0	0.0	45.3	0.1	1.7	1.7	0.0	0.0	31.2	1014
Some secondary or more (10+)	71.1	69.4	37.6	13.7	2.4	0.1	47.2	0.1	0.7	0.7	0.0	0.0	28.9	3841
DK/Missing	72.2	68.3	35.5	17.7	3.2	0.0	43.6	0.5	1.4	1.4	0.0	0.0	27.8	313
Current Breastfeeding Status														
Breastfeeding	71.9	70.2	36.3	15.6	1.9	0.0	46.1	0.1	1.6	1.6	0.0	0.0	18.1	4299
Not Breastfeeding	63.7	61.5	36.4	16.1	3.3	0.0	46.2	0.2	0.0	0.0	0.0	0.0	36.3	1307
Missing														464
Total	70.1	68.2	36.4	15.6	2.4	0.0	46.1	0.1	1.1	1.1	0.0	0.0	29.9	6070

Differentials by Selected Background Characteristics

The level of contraceptive use differs across different ages. The more the age increases the more likely women use contraceptive methods. As shown in Table 3.4, about 70.8% of women of age 35 or more are currently using contraception compared with 63.8% of women of age less than 20. Women of age 20 or more commonly use the IUD, while those of age less than 20 commonly use the pills. It was noticed that the more the age increases the more likely women to be using injectables.

Among different education level, it was found that the higher the education level the more likely women use contraceptive methods. Among uneducated women, about 66.9% use contraception. When women are educated, this percent increases to 68.8% for those who completed primary or some primary education and 71.1% for those who completed some secondary education or more. As shown in Table 3.4, the higher the education level, women are more likely to be using pills and IUD and less likely to be using injectables.

Differentials by Place of Residence

Generally, the level of contraceptive use is higher in Lower Egypt compared with Upper Egypt. As shown in Table 3.4, around three quarters of women in Lower Egypt use contraception, compared with around two third of those in Upper Egypt.

In Upper Egypt, women in intervention districts are significantly more likely to be using IUD (44.0%) than women in control districts (38.4%). However, women in control districts are significantly more likely to be using pills (44.2%) than women in intervention districts (37.7%).

In Lower Egypt, there is only a significant difference between the percent of women using IUD, in which women in intervention districts are more likely to be using it (53.4%) than those in control districts (47.6%).

3.2.4 Participation in Contraception Decisions

Women were asked who mainly decides using contraception. As shown in Table 3.5, about three quarters of the women in the sample stated that it is a joint decision (husband and wife), followed by those who stated that it is their own decision (17.7%).

Results in Table 3.5 indicate almost no significant difference between who decides using contraception among different ages of women. Among different levels of education, the percent of those who take the decision of contraception use jointly with their husbands slightly increases with higher level of education, and so the percent of those who take the decision individually (woman only or husband only) slightly decreases with higher level of education, as shown in Table 3.5.

Table 3.5: Decision of Contraception Use

Background characteristic	Decision of Contraception Use is mainly made by				Number of women
	Mainly women	Mainly Husband	Joint Decision	Other	
Age					
Less than 20	17.7	5.4	76.1	0.9	351
20-24	17.5	5.4	76.6	0.5	1974
25-34	17.7	5.7	75.9	0.7	2813
35+	17.9	7.6	74.2	0.4	503
DK/Missing	19.9	8.0	71.3	0.8	251
Region by intervention					
Upper Egypt					
Intervention	20.6	7.0	71.7	0.7	1463
Control	18.3	4.7	76.6	0.3	1489
<i>p-values</i>	0.005				
Lower Egypt					
Intervention	19.4	7.3	72.4	0.9	1453
Control	12.6	4.4	82.3	0.6	1487
<i>p-values</i>	0.000				
Education					
No education	18.7	6.9	73.9	0.5	881
Primary or some primary (1-<=9)	19.3	7.2	72.9	0.6	979
Some secondary or more (10+)	17.0	4.9	77.5	0.6	3736
DK/Missing	19.3	9.8	69.6	1.4	296
Total	17.7	5.8	75.8	0.6	5892

According to the place of residence, there is a significant difference between who takes the decision of contraception use among control and intervention districts in both Upper and Lower Egypt. Women in control districts are more likely to take the decision jointly with their husbands than those in the intervention districts. For example, in Lower Egypt, 82.3% of women in control districts take the decision jointly with their husbands, compared with 72.4% of women in intervention districts, as shown in table 3.5.

3.3 MATERNAL HEALTH

Maternal health has been one of the major focuses of the health program in Egypt. Adequate antenatal care is important in monitoring women's health status during pregnancy and in avoiding maternal deaths. Appropriate medical care during pregnancy, at delivery, and in the early postnatal period is also crucial in identifying children at greater risk of mortality. This section investigates the extent to which women are obtaining medical care during pregnancy, at the time of delivery, and in the postnatal period. To obtain data on utilization of maternity care services, women were asked a series of questions relating to the types of health care services that they received during pregnancy, at delivery, and in the postnatal period. This information was collected from women in reproductive age that had a live birth in the two years preceding the survey. This section presents the results of these questions.

3.3.1 Antenatal Care

Women who were pregnant in the two years preceding the survey were asked about the antenatal care (ANC) they received, including the source of care, number of visits, time of first ANC, tetanus injections and iron tablets, types of services offered during pregnancy, and the extent of knowing the complications women may suffer during pregnancy.

Source of Care

Almost all women in the sample had ANC during their last pregnancy (99.2%). The vast majority of these women had received ANC from the private sector, specifically the private clinics (79.9%).

Results in Table 3.6 show that there is almost no significant difference between women of different ages in the places where they received their ANC, however, there is a significant difference among different education levels. Percent of uneducated women received their ANC from private clinic (70.3%) is significantly less than those with primary or some primary education (79.1%) and those with some secondary education or more (83.3%). In addition, uneducated women are more likely to be receiving their ANC from public hospitals (22.2%) than those with some secondary education or more (15.7%).

Based on place of residence, women in control districts are more likely to receive their ANC from private clinics (86.0% in Upper Egypt and 80.5% in Lower Egypt) than those in intervention districts (77.9% in Upper Egypt and 75.2% in Lower Egypt). However, women in intervention districts tend to receive their ANC from public hospitals (22.3% in Upper Egypt and 22.3% in Lower Egypt) more likely than those in control districts (14.6% in Upper Egypt and 14.2% in Lower Egypt), as shown in Table 3.6. In Upper Egypt, percent of women seek ANC from public sector in intervention districts is significantly greater than those in control districts. This situation is reversed in Lower Egypt. For example, in Lower Egypt, about 11.3% of women in control districts received their ANC from polyclinics, while only 6.7% of women in intervention districts did so.

Number of ANC Visits & Timing

Considering only women with ANC, the data shows that more than three quarters of these women emphasized on having four antenatal visits or more. As shown in Table 3.7, younger women are more likely to have larger number of visits than older women. For example, 80.4% of women of age less than 20 had 4 or more antenatal visits, compared with 74.7% of women of age 35 or more. Also, when the education level of the woman is high, they tend to have more antenatal visits. Around 82.0% of women with some secondary education or more had 4 or more antenatal visits, compared with about 70.0% of each of uneducated women and women with primary or some primary education. Based on the place of residence, there is a significant difference between control and intervention districts in the number of antenatal visits women had during pregnancy, agreeing in that the majority of women in both districts had 4 visits or more. Nevertheless, women in control districts (78.8% in Upper Egypt and 80.1% in Lower Egypt) tend to have larger times of antenatal visits (4 or more) compared with women in intervention districts (73.6% in Upper Egypt and 77.0% in Lower Egypt), as shown in Table 3.7

Table 3.6: Antenatal care

Percent distribution of women age 15-49 who had a live birth in the two years preceding the survey by place of antenatal care (ANC) during pregnancy for the most recent birth according to background characteristics

Background characteristic	No ANC	Any ANC	Place of Antenatal care							Number of women with ANC	Number of women
			Public Sector			Private Sector			At Home		
			Public Clinic	Public Hospital	Health Unit	Private Hospital	Polyclinic	Private Clinic			
Women Age											
Less than 20	0.0	100.0	3.1	15.8	4.8	2.5	6.8	83.7	2.8	355	358
20-24	0.8	99.2	5.3	19.5	3.8	3.4	8.4	81.1	1.7	1995	2043
25-34	0.7	99.3	5.3	16.9	5.3	2.6	7.4	79.7	2.4	2834	2899
35+	1.0	99.0	3.1	18.2	3.3	4.7	7.4	80.3	2.0	512	522
DK /Missing	2.3	97.7	4.0	27.8	3.2	3.6	8.9	67.3	5.6	248	263
Region by intervention											
Upper Egypt											
Intervention	1.1	98.9	5.5	22.3	5.7	3.0	6.1	77.9	2.6	1467	1525
Comparison	1.2	98.8	3.3	14.6	3.1	2.5	7.0	86.0	2.4	1495	1526
<i>p-values</i>	0.739	0.739	0.005	0.000	0.001	0.382	0.326	0.000	0.751		
Lower Egypt											
Intervention	0.4	99.6	5.8	22.3	3.3	4.6	6.7	75.2	2.0	1473	1510
Comparison	0.3	99.7	5.2	14.2	6.1	2.3	11.3	80.5	2.2	1509	1524
<i>p-values</i>	0.751	0.751	0.423	0.000	0.000	0.000	0.000	0.000	0.676		
Education											
No education	1.0	99.0	3.2	22.2	5.2	4.3	7.9	70.3	4.6	868	905
Primary or some primary (1-<=9)	0.8	99.2	4.5	21.4	5.5	2.9	5.8	79.1	2.5	988	1019
Some secondary or more (+10)	0.5	99.5	5.4	15.7	4.4	2.7	8.5	83.3	1.8	3791	3846
DK/Missing	2.9	97.1	6.1	30.0	1.7	4.4	4.4	67.3	1.3	297	315
Total	0.8	99.2	4.9	18.3	4.5	3.1	7.8	79.9	2.3	5944	6085

Table 3.7: Number of antenatal care visits and timing of first visit

Background characteristic	No ANC	Number of ANC visits				Number of women with ANC**	Number of months pregnant at time of first ANC visit					Number of women with ANC**	Median months pregnant at first visit (for those with ANC)	Number of Women
		1	2-3	4+	DK		<4	4-5	6-7	8+	DK			
Women Age														
Less than 20	0.0	0.6	12.5	80.4	6.5	352	79.1	15.1	1.7	0.6	3.4	350	2.0	358
20-24	0.8	0.9	11.9	82.3	4.8	2001	81.5	10.9	3.4	1.0	3.2	2015	2.0	2043
25-34	0.7	2.3	14.8	75.2	7.7	2839	75.1	15.6	5.0	1.3	3.0	2867	2.0	2899
35+	1.0	2.5	16.1	74.7	6.7	510	74.7	17.1	5.3	0.6	2.3	514	2.0	522
DK/Missing	2.3	5.3	20.9	63.9	9.8	244	67.2	12.0	7.9	2.5	10.4	241	2.0	263
Region by intervention														
Upper Egypt														
Intervention	1.1	2.8	14.7	73.6	8.8	1481	74.6	14.4	4.2	1.7	5.1	1497	2.0	1525
Control	1.2	1.7	12.4	78.8	7.1	1497	79.0	13.4	4.1	1.1	2.5	1494	2.0	1526
	<i>p-values</i>	0.739	(0.005)						(0.001)					
Lower Egypt														
Intervention	0.4	1.2	15.1	77.0	6.6	1463	76.3	14.0	4.7	1.1	3.8	1489	2.0	1510
Control	0.3	1.7	13.9	80.1	4.3	1505	78.6	14.0	4.7	0.8	1.9	1507	2.0	1524
	<i>p-values</i>	0.751	(0.014)						(0.020)					
Education														
No education	1.0	3.8	17.3	70.0	9.0	869	68.3	16.6	7.0	1.3	6.9	870	2.0	905
Primary or some primary (1-<=9)	0.8	2.5	16.4	70.1	10.9	997	69.4	18.2	6.3	1.3	4.8	1008	2.0	1019
Some secondary or more (10+)	0.5	1.2	12.1	81.9	4.8	3778	82.2	11.7	3.0	0.9	2.1	3802	2.0	3846
DK/Missing	2.9	2.6	21.2	66.6	9.6	302	64.8	20.2	8.5	3.3	3.3	307	2.0	315
Total	0.8	1.9	14.0	77.4	6.7	5946	77.1	13.9	4.4	1.2	3.3	5987	2.0	6085

** The difference between the values in both columns returns to the difference between the number of responses.

To prevent problems, it is recommended that women have their first antenatal checkup early in the pregnancy. Among those women for which antenatal care was reported, the first visit occurred before the fourth month of pregnancy in 77.1% of births. Half of mothers who received antenatal care reported having their first visit at the second month of pregnancy. Same results can be obtained when comparing among age, education level, and place of residence, as shown in table 3.7. It is worth to mention that women of age 20-24 (81.5%) and completed some secondary education or more (82.2%) tend to have their checkup earlier compared with other women. Based on the place of residence, there is a significant difference between control and intervention districts in the timing of the first antenatal visits, agreeing in that the majority of women in both districts had their first visit before the fourth month of pregnancy. Nevertheless, women in control districts (79.0% in Upper Egypt and 78.6% in Lower Egypt) are more likely to have their antenatal checkup earlier (before the fourth month of pregnancy) compared with women in intervention districts (74.6% in Upper Egypt and 76.3% in Lower Egypt), as shown in Table 3.7.

Tetanus Vaccination and Iron Tablets

Tetanus injections (TT) are given to women during pregnancy to prevent deaths from neonatal tetanus. Iron supplementation during pregnancy is recommended to prevent iron deficiency anemia, which is a common problem among pregnant women. Women survey questionnaire asked mothers whether they had taken iron tablets and tetanus injections (TT) during the pregnancy or not, and those who confirmed receiving TT injections were asked about on the number of doses received. Table 3.8 presents the percent distribution of women received iron tablets and took two or more TT injections during pregnancy by age, education level, and place of residence. Results show that 71.7% of women took iron tablets, among which 50% had taken them for about a month or less. The data show that only one third of the women took at least 90 iron tablets during their pregnancy period. The higher the education and age of woman the more likely that she consumes at least 90 iron tables as shown in Table 3.8. Results also show that about 40.6% received two or more TT injections during pregnancy.

There are clear differences in levels of receiving iron tablets and TT injections specifically among different ages and different education level. It was found that older women are less likely to receive TT injections, in which 74.8% of women of age less than 20 received two or more TT injections during pregnancy compared with only 23.4% of those of age 35 or more. In addition, the percent of women of age ranges from 20 to 34 and took iron tablets during pregnancy (about 73%) is greater than those of age less than 20 or greater than 35 (about 65%), as shown in Table 3.8. It was also found that the higher the education level, the more likely women tend to take iron tablets and receive TT injections. For example, 56.1% of uneducated women confirmed taking iron tablets during pregnancy. This percent increased to 64.9% for those with primary or some primary education and to 77.5% for those with some secondary education or more. Same trend was identified for those who received two TT injections or more during pregnancy, as shown in Table 3.8.

Table 3.8: Components of antenatal care

Background characteristic	Iron Tablets			Percentage receiving two or more TT injections during last pregnancy	Number of women received TT injections during last pregnancy	Number of women
	Took iron tablets	<90 among those who took iron tablets	90 or more			
Women Age						
Less than 20	65.6	68.3	30.8	74.8	206	358
20-24	73.0	66.4	32.5	52.2	1381	2051
25-34	73.6	64.7	34.0	31.8	1991	2902
35+	65.4	65.3	34.1	23.4	304	526
DK/Missing	60.1	72.7	26.7	38.0	142	263
Region by intervention						
Upper Egypt						
Intervention	69.0	66.3	32.2	41.7	1034	1528
Comparison	68.3	63.6	35.0	39.7	1025	1529
<i>p-values</i>	0.284		0.017	0.361		
Lower Egypt						
Intervention	75.9	68.5	30.6	43.9	994	1515
Comparison	73.4	65.1	34.3	37.1	971	1528
<i>p-values</i>	0.029		0.013	0.002		
Education						
No education	56.1	72.7	26.9	31.7	499	905
Primary or some primary (1- <=9)	64.9	67.8	30.8	38.5	608	1017
Some secondary or more (10+)	77.5	63.7	35.1	42.4	2735	3861
DK/Missing	65.9	75.0	25.0	44.5	182	317
Total	71.7	65.8	33.0	40.6	4024	6100

Based on the place of residence, there was no significant difference in the percent of taking iron tablets or receiving TT injections among control and intervention districts in Upper Egypt. However, in Lower Egypt, women in intervention districts were significantly more likely to be taking iron tablets (69.0%) and receiving TT injections (41.7%) than control districts (68.3% and 39.7%, respectively). In both Upper and Lower Egypt, women in control districts tend to take iron tablets for a longer period of time than those in intervention districts.

Types of Services Offered During Pregnancy

Women in the sample were asked whether they were weighed, height measured, had their blood pressure measured, and urine and blood samples taken during their pregnancy. These women were also asked whether they were counseled on child spacing and breastfeeding. Table 3.9 shows that the vast majority of women (83.3%) had their blood pressure been measured, followed by those who reported that blood and urine samples were taken; 75.2% and 72.6%, respectively. Only 35.7% of women confirmed having their height measured. About 58.8% of women were counseled on breastfeeding and about half of them were counseled on child spacing.

Table 3.9: Services offered during Pregnancy of Last Birth

	Among women with a child less than 24 months, the percentage with the selected services during pregnancy of last birth							Number of women
Background characteristic	Counseling in Child Spacing	Blood pressure measured	Urine sample taken	Blood sample taken	Counseled on Breastfeeding	Weight taken	Height taken	
Women Age								
Less than 20	56.0	82.0	74.2	81.4	60.4	74.8	33.2	361
20-24	53.4	84.7	76.0	79.9	61.3	73.4	39.3	2051
25-34	50.8	83.5	71.2	72.6	60.4	70.2	35.5	2906
35+	45.4	84.0	69.6	71.1	49.4	55.3	27.2	526
DK/Missing	26.6	70.0	66.2	66.2	37.3	58.9	28.9	263
Region by intervention								
Upper Egypt								
Intervention	49.6	79.0	67.4	69.0	60.7	66.7	30.8	1530
Control	48.6	83.1	68.0	70.8	57.0	62.4	31.3	1529
<i>p-values</i>	0.193	0.026	0.933	0.448	0.006	0.004	0.973	
Lower Egypt								
Intervention	52.5	85.2	77.5	80.3	60.4	76.2	38.8	1519
Control	51.1	86.0	77.7	80.7	57.0	73.8	41.7	1529
<i>p-values</i>	0.023	0.883	0.268	0.484	0.001	0.046	0.359	
Education								
No education	39.6	75.0	64.4	65.4	47.3	60.0	27.8	905
Primary or some primary (1-<=9)	48.6	82.6	68.6	69.4	56.2	63.2	30.3	1019
Some secondary or more (10+)	54.1	86.2	76.1	79.3	62.7	74.0	38.8	3864
DK/Missing	43.6	73.4	66.5	71.8	51.7	67.4	36.7	319
Total	50.5	83.3	72.6	75.2	58.8	69.8	35.7	6107

It was noticed from the results in Table 3.9 that older women (of age 35 or more) are less likely to be counseled on child spacing (45.4%) and breastfeeding (49.4%) or have their weight measured (55.3%), compared with younger women. Among different education levels, women with no education were generally less likely to be offered all these services during pregnancy, especially to be counseled on child spacing or breastfeeding, compared with educated women.

There was no significant difference between control and intervention districts in both Upper and Lower Egypt in the services being offered to pregnant women, except for counseling on breastfeeding and having the weight measured. Percent of women that were offered these two services in the intervention districts is higher than that in control districts, as shown in table 3.9.

Knowledge of Complications during Pregnancy

Women were asked about the complications woman may suffer during pregnancy. About 10.2% of women stated that they don't know about any complications. Among those who have knowledge with these complications, slightly above half (53.7%) stated that woman may suffer from vaginal bleeding during pregnancy, representing the highest cited complication. This was

followed by those who stated that she may have severe abdominal pain (41.7%). Approximately 23.9% had added the pregnancy poisoning (Preeclampsia and Eclampsia), as shown in Table 3.10.

Among selected background characteristics, namely age and education level, there is nearly no significant difference between levels of women knowledge of complications during pregnancy. However, when comparing among place of residence, it was found that women in intervention districts in Lower Egypt (10.8%) are less likely to know about complications during pregnancy in general than in control districts (7.6%). In Upper Egypt, no significant difference was found.

Concerning women with knowledge in Upper Egypt, Table 3.10 shows that those in control districts are significantly more likely to know about severe abdominal pain (40.3%), fever (12.1%), and pregnancy poisoning (30.0%) than those in intervention districts (34.1%, 8.6%, and 26.5%, respectively). However, women in intervention districts are significantly more likely to know about vaginal bleeding (57.0%) than those in control districts (53.0%). In Lower Egypt, women in control districts significantly have higher knowledge of severe abdominal pain (50.2%), pregnancy poisoning (22.1%), stopping of baby movement (19.2%), and fever (11.9%) than those in the intervention districts (41.9%, 17.1%, 15.6%, and 9.4%, respectively). On the other hand, women in intervention districts have significantly higher knowledge of headache / blurred vision (16.5%) and the leak of brownish fluid from the vagina (10.8%) than those in control districts (13.8% and 7.9%, respectively).

Table 3.10: Knowledge of complications during pregnancy

Background characteristic	Don't Know	Knowledge of at least one complication	Knowledge of complications during pregnancy										Number of women have knowledge of complications	Number of women
			Vaginal Bleeding	Fast / difficult breathing	Fever	Severe abdominal pain	Headache / blurred vision	Convulsions	Baby stops moving	Leaking brownish fluid from the vagina	Pregnancy poisoning (Preeclampsia and Eclampsia)	Other**		
Women Age														
Less than 20	12.7	87.3	47.3	3.5	7.3	47.6	17.8	1.0	16.8	8.6	19.7	1.6	351	361
20-24	9.1	90.9	55.1	5.3	10.4	42.7	15.6	1.4	16.8	8.5	21.5	3.5	1863	2049
25-34	9.9	90.1	53.2	3.6	10.9	41.6	17.4	1.4	19.7	7.9	24.9	3.4	2608	2895
35+	12.9	87.1	59.0	5.0	14.6	40.0	19.4	2.8	16.2	7.4	31.2	4.1	458	526
DK/Missing	13.7	86.3	45.6	6.2	4.0	31.0	17.3	3.5	15.9	4.4	23.5	5.8	226	262
Region by intervention														
Upper Egypt														
Intervention	12.2	87.8	57.0	3.9	8.6	34.1	18.6	2.2	19.3	7.6	26.5	5.0	1342	1528
Control	10.3	89.7	53.0	3.3	12.1	40.3	19.3	2.7	18.2	5.8	30.0	3.9	1371	1528
p-values	0.096	0.096	0.034	0.352	0.003	0.001	0.641	0.363	0.448	0.055	0.046	0.183		
Lower Egypt														
Intervention	10.8	89.2	53.9	4.9	9.4	41.9	16.5	1.0	15.6	10.8	17.1	2.6	1348	1512
Control	7.6	92.4	51.0	5.4	11.9	50.2	13.8	0.6	19.2	7.9	22.1	2.5	1409	1525
p-values	0.002	0.002	0.118	0.554	0.033	0.000	0.042	0.336	0.011	0.009	0.001	0.851		
Education														
No education	15.2	84.8	47.6	5.2	8.1	38.0	17.0	2.0	20.8	8.1	22.0	2.65	765	902
Primary or some primary (1-<=9)	12.4	87.6	49.8	3.6	9.2	42.5	21.0	1.7	18.2	7.7	25.5	4.5	891	1017
Some secondary or more (10+)	7.8	92.2	55.9	4.4	11.4	42.6	16.1	1.6	18.0	7.9	24.7	3.7	3557	3858
DK/Missing	18.7	81.3	54.5	4.3	11.3	38.5	16.0	0.8	11.3	9.7	13.2	0.4	257	316
Total	10.2	89.8	53.7	4.4	10.5	41.7	17.0	1.6	18.1	8.0	23.9	3.5	5470	6093

** Includes Back pain and foot swelling



3.3.2 Delivery Care

Another crucial element in reducing health risks for mothers and children is increasing the proportion of babies who are delivered in health facilities. Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause death or serious illness for either the mother or the baby. This section discusses three topics related to delivery: place of delivery, type of assistance during delivery, and knowledge of complications during delivery.

Place of Delivery

The women's questionnaire included questions about place of delivery, the person who made the decision about the place of delivery, and factors affecting the choice of the place. As shown in Table 3.11, the majority of women (54.7%) delivered at a private clinic, followed by those who delivered at a hospital (30.8%). About 11.7% of women delivered at home and 2.2% delivered at a public health unit. Minor differences exist between different ages and different working status of women. Among different education levels, the majority of women who completed some secondary education or more (62.0%) delivered at a private clinic. For women with less level of education, they were divided among those who delivered at a private facility and those who delivered at a hospital (about 40% each).

As shown in Table 3.11, there is a significant difference between women in control districts and women in intervention districts according to the place of delivery. In Upper Egypt, women in intervention districts (45.5%) were more likely to deliver at hospitals compared with those in control districts (29.7%), and less likely to deliver at a private clinic (39.0%) compared with those in control districts (56.7%). The reversed case is in Lower Egypt, as shown in Table 3.11.

Women were also asked who made the decision about the place of delivery. About 63.8% stated that it was her own decision, and 48.5% stated that it was the decision of the husband. Same percentage obtained among different education level, except that uneducated women (70.8%) were more likely to take the decision by themselves compared with educated women, as shown in Table 3.12. Also, no remarkable difference between control and intervention districts concerning who takes the decision of place of delivery, except that the husbands' of women in control districts were more likely to be taking the decision (54.0% in Upper Egypt and 52.2% in Lower Egypt) compared with the intervention districts (43.8% in Upper Egypt and 43.8% in lower Egypt).

The majority of women who delivered in hospitals (59.6%), private facilities (64.0%), and home (77.1%) decided the place of delivery by their own. However, those who delivered in a public facility, either the decision was mainly made by the woman herself (49.1%) or her husband himself (48.2%), as shown in table 3.12.

There is a significant difference between those who had ANC and those who didn't concerning the person who decided the place of delivery. Women with no ANC agreed that it is the husband mainly who decided the place of delivery (55.6%), while women who had ANC agreed that they were mainly who decided the place of delivery (about 65%), as shown in Table 3.12

Table 3.11: Place of delivery

Background characteristic	Health Unit	Private Clinic	Hospital	Home	Missing	Total	Percentage delivered in a health facility	Number of births
Women Age								
Less than 20	2.2	59.3	29.1	9.4	0.0	100.0	90.6	361
20-24	2.9	55.6	30.0	11.2	0.2	100.0	88.5	2051
25-34	2.1	55.8	30.2	11.3	0.6	100.0	88.1	2906
35+	1.3	47.3	35.6	15.0	0.8	100.0	84.2	526
DK/Missing	0.8	42.6	36.5	17.5	2.7	100.0	79.9	263
Region by intervention								
Upper Egypt								
Intervention	1.9	39.0	45.5	12.9	0.7	100.0	86.4	1530
Control	1.1	56.7	29.7	12.2	0.3	100.0	87.5	1529
<i>p-values</i>	0.000							
Lower Egypt								
Intervention	3.2	63.2	21.2	11.7	0.7	100.0	87.6	1519
Control	2.7	59.9	26.8	10.1	0.5	100.0	89.4	1529
<i>p-values</i>	0.006							
Education								
No education	1.7	39.2	39.6	19.2	0.3	100.0	80.5	905
Primary or some primary (1-<=9)	2.2	40.8	41.3	15.2	0.5	100.0	84.3	1019
Some secondary or more (10+)	2.4	62.0	26.3	8.8	0.5	100.0	90.7	3864
DK/Missing	2.5	53.9	27.3	14.7	1.6	100.0	83.7	319
Working Status of Women								
Working for Cash	2.0	62.2	25.8	9.3	0.7	100.0	90.0	592
Not working for cash	6.5	53.2	31.2	9.1	0.0	100.0	90.9	77
Not working at all	2.1	53.9	31.2	12.2	0.6	100.0	87.2	5256
Missing								182
Total	2.2	54.7	30.8	11.7	0.5	100.0	87.7	6107

Table 3.12: Decision about Place of Delivery

Background characteristic	Don't Remember /No One Decided	Decision about where to deliver							Number of women with knowledge of who decided	Number of women
		Mainly Women	Mainly Husband	Mother	Mother-in-law	Father in-law	Friends/ Neighbor	Health Advisor (Visitor)		
ANC Visits										
None	4.3	37.8	55.6	0.0	0.0	0.0	0.0	11.1	45	47
1-3	13.0	65.4	39.1	3.2	7.6	0.9	1.6	1.8	815	937
4 or more	9.2	64.2	50.6	5.9	7.8	0.5	2.3	4.1	4164	4585
DK	9.1	58.5	42.6	5.6	4.5	0.6	5.3	6.7	359	395
Missing									100	110
Place of Delivery										
Hospital	11.4	59.6	45.4	6.7	8.4	0.8	2.8	8.3	1660	1873
Public Facility	16.7	49.1	48.2	0.0	10.9	1.8	2.7	0.9	110	132
Private Facility	7.4	64.0	53.7	5.1	6.0	0.6	2.5	2.0	3090	3336
Home	15.4	77.1	29.0	4.4	12.5	0.0	0.8	2.9	594	702
Missing									29	31
Region by intervention										
Upper Egypt										
Intervention	10.2	65.2	43.8	6.4	6.9	0.7	2.1	5.2	1367	1523
Control	10.7	66.2	54.0	5.1	6.8	0.4	2.0	3.4	1362	1525
p-values	0.688	0.565	0.000	0.146	0.900	0.194	0.798	0.019		
Lower Egypt										
Intervention	9.0	59.5	43.8	5.1	9.4	0.8	3.5	4.6	1369	1504
Control	9.0	64.3	52.2	5.0	6.9	0.4	1.9	2.7	1385	1522
p-values	0.981	0.011	0.000	0.875	0.017	0.212	0.012	0.006		
Education										
No education	11.2	70.8	42.3	7.6	6.4	0.5	1.9	5.0	801	902
Primary or some primary (1-<=9)	9.9	60.5	48.5	5.3	8.7	0.4	2.7	5.5	910	1010
Some secondary or more (+10)	9.3	63.0	49.9	5.4	7.5	0.6	2.4	3.0	3484	3843
DK/Missing	9.7	63.9	48.3	0.0	6.9	1.4	2.8	7.3	288	319
Total	9.7	63.8	48.5	5.4	7.5	0.6	2.4	4.0	5483	6074

Table 3.13 shows the factor influenced the choice of the place where woman delivered. As shown, slightly less than half of the women (47.9%) chose the place because of having good antenatal care there during pregnancy, followed by those who stated that the doctor at clinic advised her with that place and those who chose the place because of some financial/ family reasons and circumstances (18.9% each). Most of reasons stated do not significantly differ among different ages, except that younger women are more likely to state that their husbands told them about the place, older women are more likely to state that they suffered from complications during last delivery.

Table 3.13: Factors influencing place of delivery

Background characteristic	Factors influencing place of delivery						Number of women
	Health Advisor (Visitor) referred me	Husband told me	Doctor at clinic told me	Received good antenatal care during last visit	Suffered complications during last delivery	Financial/ Family reasons and circumstances	
Women Age							
Less than 20	1.9	12.1	21.6	46.3	4.8	17.1	315
20-24	3.6	11.7	20.1	50.7	6.5	16.2	1857
25-34	1.8	9.9	18.8	47.8	8.0	19.5	2584
35+	1.1	7.3	16.9	42.6	11.8	25.5	467
DK/Missing	2.6	16.7	9.3	40.5	7.5	24.7	227
Region by intervention							
Upper Egypt							
Intervention	2.4	7.4	17.2	42.1	10.3	26.7	1317
Control	1.5	13.2	16.8	49.4	6.8	20.4	1390
<i>p-values</i>	0.086	0.000	0.743	0.000	0.001	0.000	
Lower Egypt							
Intervention	3.8	11.2	20.2	49.7	7.1	12.2	1335
Control	1.8	11.0	21.2	50.2	6.3	16.5	1408
<i>p-values</i>	0.002	0.899	0.514	0.804	0.406	0.001	
Education							
No education	3.9	15.3	18.8	32.2	8.6	25.2	777
Primary or some primary (1-<=9)	3.1	12.2	17.7	39.8	8.7	23.7	871
Some secondary or more (10+)	1.9	9.1	19.2	53.7	6.9	16.6	3528
DK/Missing	2.2	14.2	19.0	43.8	9.5	16.4	274
Decision of place of delivery							
Mainly Women	2.7	4.5	15.7	51.6	7.6	22.6	1918
Mainly Husband	1.1	19.2	20.0	45.6	6.7	11.4	1224
Joint Decision (Woman & Husband)	2.8	15.6	16.8	55.3	8.5	12.8	1180
Health Advisor(Visitor)	13.4	4.5	35.1	17.2	16.4	14.2	134
Other	1.7	8.7	16.0	49.1	5.0	26.0	599
Missing							395
Total	2.4	10.7	18.9	47.9	7.6	18.9	5450

More than half of women with some secondary education or more (53.7%) mainly chose the place of delivery because of receiving good antenatal care there. This significantly differ from the factors influenced women with less education level, as shown in Table 3.13. Minor differences between respondents' reasoning can be noticed among intervention and control districts in Lower and Upper Egypt.

Finally, the majority of women who had decided the place of delivery by their own (51.6%), or their husbands decided by their own (45.6%), or they jointly decided it (55.3%) chose the place of delivery because of having good antenatal care there during pregnancy, as shown in Table 3.13.

Assistance during Delivery

Due to the fact that 54.7% delivered at a private facility and 30.8% delivered at a hospital, it was found that 85.8% of the deliveries were assisted by a doctor. Table 3.14 shows that approximately 54.4% of those who delivered at public facilities were assisted by a doctor, while 28% were assisted by traditional birth attendant. Those who delivered at home, about 57.0% of them were assisted by traditional birth attendant, slightly below one quarter were assisted by a certified nurse, and only 12.0% were assisted by a doctor. Being delivered at public facility or home show significant difference with those delivered at hospital and private facility, whom assistance was mainly a doctor. No other remarkable differences were shown in Table 3.14.

Table 3.14: Assistance during delivery

Background characteristic	Person providing assistance during delivery							Total	Percentage delivered by a skilled provider	Number of births
	Doctor	Certified Nurse	Traditional Birth Attendant	Health Advisor (Visitor)	Relative/ Neighbor	No one	Missing			
Women Age										
Less than 20	89.8	1.9	6.4	0.0	0.0	1.9	0.0	100.0	91.7	361
20-24	85.8	3.8	7.8	0.4	0.1	1.2	0.9	100.0	89.6	2051
25-34	87.2	4.0	7.0	0.1	0.1	1.2	0.3	100.0	91.2	2906
35+	82.9	6.3	7.4	0.0	0.4	1.7	1.3	100.0	89.2	526
DK/Missing	71.5	6.8	19.0	1.1	0.0	1.5	0.0	100.0	78.4	263
Place of Delivery										
Hospital	95.6	2.5	0.3	0.4	0.0	1.1	0.2	100.0	98.1	1882
Public Facility	54.4	5.9	27.9	1.5	0.0	10.3	0.0	100.0	60.3	136
Private Facility	98.0	0.6	0.2	0.1	0.0	0.4	0.7	100.0	98.6	3339
Home	12.0	24.0	57.0	0.3	1.3	4.7	0.7	100.0	36.0	717
Missing										33
Region by intervention										
Upper Egypt										
Intervention	84.6	4.4	8.4	0.4	0.3	1.5	0.4	100.0	89.0	1530
Control	85.6	5.1	7.5	0.2	0.2	1.1	0.3	100.0	90.7	1529
<i>p-values</i>	0.406**									
Lower Egypt										
Intervention	84.9	3.8	8.8	0.2	0.1	1.1	1.2	100.0	88.6	1519
Control	88.2	3.2	6.4	0.1	0.1	1.5	0.5	100.0	91.5	1529
<i>p-values</i>	0.012**									
Education										
No education	76.5	3.9	16.1	0.7	0.3	1.2	1.3	100.0	80.3	905
Primary or some primary (1-<=9)	83.1	6.2	8.5	0.3	0.3	1.2	0.4	100.0	89.3	1019
Some secondary or more (+10)	89.4	3.4	5.2	0.1	0.1	1.3	0.4	100.0	92.9	3864
DK/Missing	77.4	6.3	13.2	0.0	0.0	1.6	1.6	100.0	83.7	319
Total	85.8	4.1	7.8	0.2	0.1	1.3	0.6	100.0	90.0	6107

** The calculation of the p-value required merging some classes of the intended variable.

Knowledge of Complications during Delivery

Women in the survey were asked to state the complications women may encounter during delivery. About one fifth of the women in the sample stated that they do not know any of these complications. Among women who know, heavy bleeding was the highest cited complication (51.8%), followed by high fever (26.1%). About one quarter of the women (25.7%) added water breaking as one of the complications women may have, as shown in Table 3.15.

Among different ages, the older the woman, the more likely she knows about these complications. A significant difference is noticed among those who added water breaking as a complication, in which 29.4% of women of age 35 or more had mentioned it compared with only 18.7% of those of age less than 20.

As expected, the percent of women that do not know any of the complications significantly decreases with the increase of the level of education. As shown in table 3.15, 23.0% of uneducated women don't know any complication, compared with 18.3% of women with some secondary education or more.

A highly remarkable result in Table 3.15 is that slightly above half of the women that didn't have ANC do not know about any complication women may encounter during delivery. Those who have knowledge among these women mentioned only high fever (26.1%), heavy bleeding (30.4%), prolonged labor (26.1%), and water breaking (26.1%).

As for the place of residence, women in control districts are significantly more likely to have knowledge about complications during delivery than women in intervention districts.

Table 3.15: Knowledge of complications during delivering a baby

Table 3.13: Knowledge of complications during delivering a baby													
Background characteristic	Don't Know	Knowledge of at least one complication	Knowledge of complications during delivering a baby									Number of women with knowledge of complications	Number of women
			Convulsions	High Fever	Heavy Bleeding	Fast / difficult breathing	Retained Placenta	Headache / blurred vision	Prolonged labor	Water Breaking	Other*		
Women Age													
Less than 20	26.0	74.0	1.1	30.0	57.7	3.4	6.4	8.2	14.6	18.7	3.4	267	361
20-24	22.5	77.5	3.8	26.0	51.7	6.2	5.1	7.2	22.2	25.1	0.9	1583	2043
25-34	18.0	82.0	3.8	25.7	50.8	7.6	4.2	7.7	21.0	26.7	0.9	2371	2891
35+	18.4	81.6	5.2	25.4	57.9	5.6	5.6	7.5	18.4	29.4	1.2	425	521
DK/Missing	25.2	74.8	2.6	28.6	42.9	6.6	8.2	3.6	18.9	19.9	2.6	196	262
ANC Visits													
None	51.1	48.9	0.0	26.1	30.4	0.0	0.0	0.0	26.1	26.1	0.0	23	47
1-3	21.6	78.4	3.7	24.3	50.1	8.5	3.3	7.3	25.4	24.3	0.4	737	940
4 or more	19.3	80.7	4.1	27.0	52.5	7.0	5.3	7.9	19.6	24.9	1.2	3696	4581
Don't Know/Missing	23.4	76.6	0.7	20.7	49.5	0.0	3.3	3.3	21.3	36.7	1.6	305	398
Place of Delivery													
Hospital	24.1	75.9	3.5	21.5	49.8	7.7	4.1	5.1	19.8	30.5	1.5	1424	1877
Public Facility	17.6	82.4	7.1	33.9	38.4	4.5	9.8	7.1	29.5	24.1	8.0	112	136
Private Facility	18.3	81.7	3.7	28.6	53.1	7.2	4.6	8.5	20.8	23.4	0.6	2713	3320
Home	20.4	79.6	3.9	24.8	52.6	3.0	7.4	6.9	21.1	25.7	1.2	568	714
Missing												81	31
Region by													
Upper Egypt													
Intervention	24.8	75.2	3.7	18.3	52.4	3.8	5.9	6.0	20.2	31.7	2.3	1145	1522
Control	20.4	79.6	3.5	21.9	55.0	6.3	3.5	6.8	20.6	32.0	0.2	1214	1526
<i>p-values</i>	0.004	0.004	0.785	0.027	0.202	0.004	0.008	0.422	0.801	0.893	0.000		
Lower Egypt													
Intervention	20.6	79.4	4.4	30.1	47.7	6.4	6.4	9.3	21.6	19.1	1.6	1194	1503
Control	15.6	84.4	3.5	33.4	51.9	10.0	3.9	7.3	20.6	20.7	0.5	1289	1527
<i>p-values</i>	0.000	0.000	0.267	0.072	0.034	0.001	0.004	0.070	0.522	0.313	0.009		
Education													
No education	23.0	77.0	4.0	27.4	56.2	6.5	5.6	7.0	23.1	20.4	1.1	697	905
Primary or some	24.6	75.4	2.7	23.3	50.8	4.2	6.7	6.3	19.0	31.9	1.4	764	1013
Some secondary or	18.3	81.7	3.8	26.6	51.3	7.6	4.2	7.8	20.5	26.0	1.0	3144	3847
Don't Know/Missing	24.3	75.7	5.1	24.9	47.7	3.8	6.3	6.3	21.9	18.6	2.5	237	313
Total	20.3	79.7	3.7	26.1	51.8	6.7	4.9	7.4	20.7	25.7	1.1	4842	6078

*Includes foot swelling and high blood pressure



3.3.3 Postnatal Care

Care after the delivery is very important not only for the newborn but also for the mother. Proper care for the mother is particularly important when the birth is not assisted by a health provider. Several visits are recommended for postnatal care. The first visit should occur within two days after delivery. Subsequent visits should occur after seven days, after two weeks, and after 40 days. This section discusses the following topics related to the postnatal care; knowledge of complications after delivery, essential newborn care, essential mother care, timing of first postnatal checkup for the mother and for the child, and knowledge of newborn illness danger signs.

Knowledge of Complications after Delivery

Women were asked about the complications a woman may encounter after delivering a baby. As shown in Table 3.16, 13.8% of women stated that they do not know any of these complications. Among women with knowledge, severe abdominal pain and excessive vaginal bleeding were the highest cited complications, 45.0% and 44.6% respectively. This was followed by high fever (37.5%).

According to some selected background characteristics, it was found that the more the age increases, the more aware the women are concerning the knowledge of the complications woman may encounter after delivery. As shown, about one fifth of women of age less than 20 do not know any of these complications. This percent decreases to 16.2% for those of age 20-24, to 11.5% for those of age 25-34, and to 10.1% for those of age 35 or more. Same conclusions are reached among women with knowledge. For example, 42.5% of women of age 35 or more stated that high fever is one of the complications that may occur after delivery, while only 26.5% of those of age less than 20 stated the same. As for the education level, no remarkable significant difference in the level of women knowledge was noticed among different education levels.

Based on the results in Table 3.16, women in intervention districts (17.4% in Upper Egypt and 13.6% in Lower Egypt) are less likely to know about the complications after delivery than women in control districts (14.6% in Upper Egypt and 9.5% in Lower Egypt). However, among women with knowledge, minor significant difference was observed between control and intervention districts in both Upper and Lower Egypt.

Table 3.16: Knowledge of complications after delivering a baby

Background characteristic	Knowledge of complications after delivering a baby													
	Don't Know	Excessive vaginal bleeding	Fast / difficult breathing	High Fever	Severe abdominal pain	Severe Headache / blurred vision	Convulsions / Loss of consciousness	Foul-smelling discharge from the vagina	Pain in calf	Verbalization/ behavior that indicates she may hurt herself or the baby	Puerperal Fever	Other	Number of women with knowledge	Number of women
Women Age														
Less than 20	20.5	43.6	1.7	26.5	47.4	7.3	0.3	2.4	5.9	0.7	26.1	0.0	287	361
20-24	16.2	44.2	5.9	36.5	48.2	7.2	2.0	7.3	6.1	1.2	17.7	0.7	1716	2047
25-34	11.5	43.2	6.6	38.7	43.7	7.2	1.9	6.3	5.8	0.7	21.2	1.6	2567	2901
35+	10.1	53.1	5.5	42.5	42.1	6.3	2.1	7.0	4.4	1.1	22.4	2.1	473	526
DK/Missing	18.3	46.5	3.7	35.8	38.1	10.7	5.1	4.7	8.4	3.3	10.2	4.2	215	263
Place of Delivery														
Hospital	15.4	47.6	5.8	38.3	38.9	7.2	2.0	6.2	6.0	0.5	19.6	1.7	1590	1880
Public Facility	6.6	43.3	13.4	33.9	48.0	4.7	3.1	1.6	11.8	18.1	30.7	0.0	127	136
Private Facility	13.3	43.4	6.1	36.1	48.9	7.3	1.8	6.6	5.8	0.5	20.6	1.5	2892	3334
Home	13.2	41.0	3.5	42.6	42.1	7.9	2.6	7.1	4.3	0.8	16.2	0.5	622	717
Missing													27	31
Region by intervention														
Upper Egypt														
Intervention	17.4	48.3	4.7	43.3	36.3	7.9	2.5	4.8	4.7	1.2	17.9	1.7	1260	1526
Control	14.6	46.7	4.7	39.5	41.0	6.9	2.8	5.1	3.3	0.5	25.8	1.8	1305	1528
<i>p-values</i>	0.032	0.444	0.992	0.047	0.016	0.315	0.636	0.733	0.072	0.037	0.000	0.852		
Lower Egypt														
Intervention	13.6	43.3	6.0	34.6	45.7	7.6	1.8	7.8	8.1	1.6	15.3	0.9	1311	1517
Control	9.5	40.3	8.0	33.3	55.9	6.9	1.2	7.8	7.3	0.7	20.8	1.2	1382	1527
<i>p-values</i>	0.000	0.112	0.042	0.487	0.000	0.497	0.194	0.973	0.449	0.017	0.000	0.428		
Education														
No education	13.6	41.4	6.4	36.5	43.5	6.5	2.2	10.0	5.0	1.2	18.3	0.8	781	904
Primary or some primary (1-<=9)	18.4	47.5	4.1	38.6	42.9	7.1	2.3	6.5	5.5	0.7	21.3	1.7	830	1017
Some secondary or more (10+)	12.1	45.1	6.3	37.9	46.1	7.5	1.9	5.5	6.0	0.9	20.4	1.5	3391	3858
DK/Missing	19.7	37.9	4.7	32.4	41.4	8.2	1.6	7.0	8.6	2.3	15.2	0.4	256	319
Working Status of Women														
Working for Cash	8.3	46.8	7.4	38.9	45.9	9.0	1.7	6.8	5.2	0.9	25.0	2.4	543	592
Not working for cash	10.4	49.3	8.7	37.7	53.6	8.7	1.4	5.8	8.7	1.4	15.9	1.4	69	77
Not working at all	14.3	44.0	5.7	37.4	44.8	7.2	2.1	6.5	5.9	0.9	19.7	1.2	4495	5248
Missing													151	181
Total	13.8	44.6	5.9	37.5	45.0	7.3	2.0	6.4	5.9	1.0	20.0	1.4	5258	6098

Women who delivered at a public facility were the ones having the highest level of knowledge of complications women may encounter after delivery, compared with those who delivered at private facilities, hospitals, or home. As shown in Table 3.16, 15.4% of women who delivered at hospitals, 13.3% of those who delivered at a private facility, and 13.2% of those who delivered at home do not know any of the complications women may have, compared with only 6.6% of those who delivered at a public facility. Women of knowledge and delivered at a public facility were more likely to mention complications such as fast/difficult breathing (13.4%), pain in calf (11.8%), Verbalization/ behavior that indicates woman may hurt herself or the baby (18.1%) , and Puerperal Fever (30.7%), compared with other women of different place of delivery.

Results in Table 3.16 show that women that do not work at all usually have the least knowledge compared with those who work, whether with cash or not.

Essential Mother Care

All women, whether they delivered in a health facility or outside of facility, were asked questions about the receipt of postnatal care. Women were asked if they received an injection after the delivery to prevent too much bleeding, the delivery assistant had manually removed the placenta, or he/she had massaged their uterus for contractions. As shown in Table 3.17, only one fifth of the women confirmed receiving injections after delivery to prevent bleeding too much, while 56.5% assured on having a manual removal of placenta and 47.7% assured on having their uterus massaged for contractions.

Minor differences were observed among women of different ages and of different education levels concerning the levels of receiving these cares. According to place of residence, no significant difference between intervention and control districts in Upper Egypt, while there is in Lower Egypt. In Lower Egypt, levels of receiving the above mentioned services for women in control districts are slightly higher than those in intervention districts, as shown in Table 3.17.

Table 3.17 shows that women delivered at hospitals or homes were more likely to have manual removal of placenta (63.0% and 66.2%, respectively) and uterus massage for contractions (51.5% and 58.9% respectively) compared with those delivered at public or private facility, with public facilities having the least levels (47.8% and 39.3%, respectively). However, there is no significant difference among women with different places of delivery with respect to receiving injection after delivery to prevent too much bleeding. It was also remarked that those who were assisted by a certified nurse were having the highest level of receiving the three services; 36.7% received an injection, 68.9% had a manual removal of placenta, and 63.4% had their uterus massaged for contractions.

Table 3.17: Essential Mother Care

Background characteristic	Mother care					
	Injection given to prevent too much bleeding	Number of Women	Manual removal of placenta	Number of Women	Uterus Massaged for contraction	Number of women
Women Age						
Less than 20	18.6	361	56.6	357	45.8	354
20-24	19.0	2045	55.6	2034	47.6	2033
25-34	20.8	2902	57.5	2871	48.3	2844
35+	20.7	526	54.1	521	46.6	521
DK/Missing	23.6	263	56.3	263	46.9	260
Region by intervention						
Upper Egypt						
Intervention	22.2	1528	61.4	1513	50.0	1509
Control	20.3	1529	61.7	1525	53.9	1515
<i>p-values</i>	0.229		0.476		0.089	
Lower Egypt						
Intervention	19.0	1513	47.6	1487	40.7	1483
Control	19.1	1527	54.9	1521	46.2	1505
<i>p-values</i>	0.002		0.000		0.000	
Education						
No education	18.6	905	57.0	899	47.8	894
Primary or some primary (1-<=9)	21.6	1017	61.7	1012	54.4	1009
Some secondary or more (10+)	19.8	3856	55.3	3828	46.1	3798
Dk/Missing	24.5	319	52.1	307	46.0	311
Place of Delivery						
Hospital	23.5	1882	63.0	1867	51.5	1855
Public Sector	21.3	136	47.8	134	39.3	135
Private Sector	18.6	3331	50.9	3301	43.5	3274
Home	18.3	717	66.2	713	58.9	717
Missing		31		31		31
Delivery assistant						
Doctor	19.6	5234	55.3	5189	46.6	5154
Traditional Birth Attendant	15.1	476	61.0	472	54.6	476
Certified Nurse	36.7	251	68.9	251	63.4	246
Other	33.0	103	60.2	103	48.5	103
Missing		33		31		33
Total	20.2	6097	56.5	6046	47.7	6012

Approximately 67% of women confirmed receiving their first postnatal checkup after hours from delivery. On the other hand, approximately 28% of women confirmed receiving a second postnatal checkup during hours from delivery. About 34.6% of women did not receive any postnatal visit. The highest percentage of women who did not receive visits are located in comparison villages in Lower Egypt (41.8%) especially those with no education (43.2%). The data also show that the majority of the postnatal checkups were conducted by a doctor. Only 10.8% of women did not have any postnatal care. No major difference was observed between women of different ages and of different education levels, as shown in Table 3.18.

Table 3.18: Timing of first and second postnatal checkup for the mother

Background characteristic	Time after delivery of mother's first and second postnatal checkup				No postnatal Checkup	No second postnatal checkup	Total	Number of women
	1 st visit Within hours	1 st visit Within days	2 nd visit Within hours	2 nd visit Within days				
Women Age								
Less than 20	65.9	10.0	25.1	27.1	5.0	34.3	100.0	361
20-24	65.6	10.0	27.5	16.7	7.3	35.6	100.0	2051
25-34	68.4	9.0	28.3	19.0	8.1	33.3	100.0	2906
35+	65.8	10.3	31.1	19.5	8.0	37.2	100.0	526
DK/Missing	65.0	6.1	26.1	20.6	9.5	37.6	100.0	263
Region by intervention								
Upper Egypt								
Intervention	63.8	9.3	35.8	19.9	8.5	31.1	100.0	1530
Comparison	67.0	9.7	31.7	15.2	5.1	34.0	100.0	1529
<i>p-values</i>	0.003							
Lower Egypt								
Intervention	67.0	9.0	24.1	23.0	8.8	29.8	100.0	1519
Comparison	70.0	9.5	22.7	17.1	8.4	41.8	100.0	1529
<i>p-values</i>	0.000							
Education								
No education	64.0	8.5	26.2	21.2	11.8	43.2	100.0	905
Primary or some primary (1-<=9)	63.1	7.6	30.9	20.6	8.7	31.2	100.0	1019
Some secondary or more (10+)	69.2	10.3	27.8	17.5	6.4	33.8	100.0	3864
DK/Missing	60.8	6.6	27.0	23.7	8.2	28.9	100.0	319
Total	66.9	9.4	27.9	18.8	10.8	34.6	100.0	6107

Based on the place of residence, minor significant difference occurred between control and intervention districts in both Upper and Lower Egypt. Women in control districts are slightly more likely to receive their first postnatal checkup after hours from delivery (67.0% in Upper Egypt and 70.0% in Lower Egypt) compared with those in intervention districts (63.8% in Upper Egypt and 67.0% in Lower Egypt).

Essential Newborn Care

Women were asked a series of question examining whether their last child received any postnatal care following the delivery or not. Postnatal care questions asked about the type of instruments used in cutting the umbilical cord, substance placed on the cut cord, whether the child was dried before placenta delivered or wrapped in a warm cloth or blanket and children with five out of five Essential Newborn Care. Also, women were asked about the timing of the first postnatal checkup for the child. Tables 3.19A – 3.19D and Table 3.20 present the results of these questions.

As shown in Table 3.19A, the vast majority of women (81.3%) do not know the instrument used in cutting the umbilical cord, and only 13.6% confirmed using brand new instruments. About 6% of women stated that nothing was put on the cut cord, while about 79% of women stated that an antiseptic was put on the cut cord, and 12.6% added that a clamp was put, as shown in table 2.19B.

Also, the vast majority of women assured that the child was dried before placenta is delivered (82.9%), and that the child was wrapped in a warm cloth or blanket (93.2%).

Unexpectedly, women with some secondary education or more were more likely to be not knowing what instrument was used in cutting the umbilical cord (84.0%), compared with those with no education (76.6%) and those with primary or some primary education (76.2%), as shown in table 3.19A. As a result they were the least to say that a brand new instrument was used in the cut (11.3%) versus 17.0% for uneducated women and 17.8% for women with primary or some primary education. Other than that, no remarkable difference among the different levels of some selected background characteristics, namely the age and the education level, was observed.

Based on place of residence, minor significant difference was usually found between intervention and control districts. Only what was remarkable is that children in intervention districts in Upper Egypt were more likely to have a clamp put on cut cord (18.7%) compared with those in control districts (10.0%). In contrast in Lower Egypt, children in control districts were more likely to have a clamp put on cut cord (15.0%) compared with those in intervention districts (5.8%), as shown in Table 3.19B. Also, children in intervention districts in Upper Egypt were more likely to be dried before the delivery of placenta (82.8%) compared with those in control districts (78.4%). In contrast in Lower Egypt, children in control districts were more likely to be dried before the delivery of placenta (88.7%) compared with those in intervention districts (81.7%), as shown in Table 3.19C.

Women who delivered at home were the less likely to be not knowing what instrument was used in cutting the cord. Slightly above one third of these women (35.7%) had confirmed the use of brand new instrument in the cut, which significantly differ from the levels of agreement of those who delivered at hospital (10.2%), at a public facility (15.4%), and at a private facility (10.4%), as shown in Table 3.19A.

Table 3.19-A: Essential Newborn Care

	Instruments Used in Cutting the cord						
Background characteristic	Brand new instruments	Used Instruments but boiled	Used Instruments but not boiled	Undetermined**	DK	Total	Number of Women
Women Age							
Less than 20	16.9	2.5	0.8	1.4	78.4	100.0	361
20-24	11.3	2.9	0.2	1.5	84.0	100.0	2048
25-34	13.4	2.0	0.7	2.5	81.4	100.0	2904
35+	17.7	2.9	0.4	1.5	77.6	100.0	526
DK/Missing	22.1	4.2	0.0	3.8	70.0	100.0	263
Region by intervention							
Upper Egypt							
Intervention	17.3	2.6	0.7	3.3	76.3	100.0	1529
Control	15.0	2.1	0.7	3.1	79.0	100.0	1527
<i>p-values</i>	0.274*						
Lower Egypt							
Intervention	13.1	2.4	0.3	0.4	83.9	100.0	1519
Control	9.2	2.9	0.3	1.6	86.1	100.0	1527
<i>p-values</i>	0.000*						
Education							
No education	17.0	2.1	0.7	3.6	76.6	100.0	905
Primary or some primary (1-<=9)	17.8	1.9	1.3	2.9	76.2	100.0	1017
Some secondary or more (+10)	11.3	2.8	0.2	1.7	84.0	100.0	3862
DK/Missing	19.5	1.6	0.3	0.0	78.6	100.0	318
Place of Delivery							
Hospital	10.2	1.4	0.6	3.2	84.6	100.0	1880
Public Sector	15.4	5.1	0.0	0.0	79.4	100.0	136
Private Sector	10.4	2.4	0.1	1.0	86.1	100.0	3338
Home	35.7	5.0	2.0	4.6	52.7	100.0	717
Missing							31
Delivery assistant							
Doctor	10.3	2.2	0.2	1.7	85.7	100.0	5239
Traditional Birth Attendant	36.8	3.6	2.3	4.0	53.4	100.0	476
Certified Nurse	38.2	5.2	2.4	4.4	49.8	100.0	251
Other	14.6	7.8	3.9	10.7	63.1	100.0	103
Missing							33
Total	13.6	2.5	0.5	2.1	81.3	100.0	6102

* The calculation of the p-value required merging some classes of the intended variable.

** Includes used instruments without a specification of its sterilization situation and/or being brand new or used (Knife – Scalpel).

Table 3.19-B: Essential Newborn Care

Background characteristic	Substance Placed on the cut cord					Clamp	Nothing	Number of women whose children had substance put on cut cord	Number of Women
	Cow Dung	A Type of Oil	Antiseptic	Ash	DK				
Women Age									
Less than 20	1.6	0.5	77.7	3.8	0.0	16.3	7.2	184	361
20-24	1.7	1.3	80.6	5.3	0.8	10.4	5.1	1008	2041
25-34	1.3	0.5	78.4	5.4	0.2	14.2	5.6	1488	2891
35+	0.0	1.0	82.5	4.1	0.0	12.4	6.1	291	526
DK/Missing	0.0	1.6	77.5	13.2	0.0	7.8	8.7	129	263
Region by intervention									
Upper Egypt									
Intervention	1.2	0.7	75.1	4.0	0.3	18.7	8.5	731	1522
Control	0.5	1.1	81.0	7.2	0.2	10.0	5.6	944	1527
<i>p-values</i>	0.000*						0.000		
Lower Egypt									
Intervention	2.8	1.9	74.9	3.5	1.1	5.8	5.2	569	1508
Control	1.1	0.1	77.7	6.1	0.1	15.0	3.6	856	1525
<i>p-values</i>	0.000*						0.000		
Education									
No education	0.2	1.3	73.8	8.6	0.0	16.0	8.3	451	900
Primary or some primary (1- <=9)	0.6	0.2	77.3	4.5	0.0	17.3	8.9	463	1017
Some secondary or more (+10)	1.4	0.8	80.3	5.2	0.5	11.7	4.2	2041	3853
DK/Missing	4.1	2.1	91.0	1.4	0.0	1.4	7.4	145	312
Place of Delivery									
Hospital	0.8	1.2	79.4	3.6	0.9	14.2	7.8	782	1871
Public Sector	25.6	0.0	62.8	3.8	3.8	3.8	0.0	78	136
Private Sector	0.7	0.8	81.0	5.5	0.1	12.0	2.6	1857	3327
Home	0.0	1.1	74.2	9.8	0.0	14.9	15.3	368	717
Missing								15	31
Delivery assistant									
Doctor	0.7	0.8	81.2	4.7	0.3	12.3	4.3	2653	5219
Traditional Birth Attendant	8.4	1.3	67.1	11.4	1.3	10.5	15.8	237	476
Certified Nurse	0.0	0.7	77.9	4.7	0.0	16.8	14.7	149	251
Other	0.0	0.0	60.8	17.6	0.0	21.6	12.6	51	103
Missing								10	33
Total	1.3	0.9	79.4	5.5	0.4	12.6	5.7	3100	6082

* The calculation of the p-value required merging some classes of the intended variable.

On the other hand, one quarter of women who delivered at a public facility mentioned putting cow dung on the cut cord, compared with only 0.8% for those who delivered at hospitals, 0.7% of those who delivered at private facilities, and none of those who delivered at home. This in fact leads these women to be less likely to mention putting antiseptic (62.8%) or clamp (3.8%) %, compared with other women as shown in Table 3.19B. Women who delivered at hospitals were less likely to have their child dried before delivering the placenta (78.7%), as shown in Table 3.19C.

When a certified nurse assist in the delivery, the umbilical cord is more likely to be cut by a brand new instrument (38.2%), and the women are less likely to be not knowing what is used to cut the cord (49.8%). The totally reversed situation occurs when the delivery assistant is a doctor, as shown in

table 3.19A. However, when a certified nurse assist in the delivery, the child is less likely to be dried before the delivery of the placenta (78.0%), as shown in Table 3.19C. If a traditional birth attendant assist in delivery, antiseptic will less likely to be put on the cut cord (67.1%) and ash will be more likely to be put (11.4%), as shown in Table 3.19B.

Table 3.19-C: Essential Newborn Care

Background characteristic	Directly After Birth			
	Child was dried before placenta delivered	Number of Women	Wrapped in warm cloth or blanket	Number of Women
Women Age				
Less than 20	81.0	357	91.0	355
20-24	81.6	2034	92.4	2028
25-34	84.2	2887	93.5	2880
35+	83.3	522	96.4	526
DK/Missing	80.6	263	91.8	256
Region by intervention				
Upper Egypt				
Intervention	82.8	1522	92.5	1514
Control	78.4	1523	93.1	1523
<i>p-values</i>	0.004		0.486	
Lower Egypt				
Intervention	81.7	1496	91.5	1492
Control	88.7	1522	95.4	1516
<i>p-values</i>	0.000		0.000	
Education				
No education	79.6	902	91.2	904
Primary or some primary (1-<=9)	80.0	1013	92.8	1000
Some secondary or more (+10)	84.8	3837	94.0	3825
DK/Missing	78.8	311	89.6	316
Place of Delivery				
Hospital	78.7	1867	89.7	1861
Public Sector	91.7	133	85.3	136
Private Sector	85.0	3315	95.0	3304
Home	82.6	717	95.0	713
Missing		31		31
Delivery assistant				
Doctor	83.0	5208	93.4	5186
Traditional Birth Attendant	83.3	473	90.3	475
Certified Nurse	78.0	246	93.2	251
Other	85.4	103	93.0	100
Missing		33		33
Total	82.9	6063	93.2	6045

Table 3.19-D: Children with five out of five ENC

Background characteristic	Among children less than 24 months	
	Percentage who get 5 out of the basic 5 ENC	Number of Children
Women Age		
Less than 20	14.4	361
20-24	14.1	2051
25-34	18.6	2904
35+	15.8	526
DK/Missing	17.1	263
Region by intervention		
Upper Egypt		
Intervention	20.3	1529
Comparison	15.4	1529
<i>p-values</i>		
Lower Egypt		
Intervention	14.7	1519
Comparison	15.6	1528
<i>p-values</i>		
Education		
No education	15.2	905
Primary or some primary (1-<=9)	16.1	1017
Some secondary or more (10+)	17.3	3864
Missing/DK	12.2	319
Total	16.5	6105

Five important essential cares for the new born are considered in table 3.19D; these are clean and sterilized instruments used in cutting the umbilical cord, antiseptic was placed on the cut cord, the child was dried before placenta delivered, wrapped in a warm cloth or blanket, and breastfed during the first hour of delivery. As shown in Table 3.19-C, only 16.5% of newborns are given all the five ENCs. It is more likely that the child given all the five ENCs when the women is with high education level (17.3%), aged 25-34 years (18.6%), and located in the intervention villages in Upper Egypt (20.3%).

Data show that about 10.7% of children hadn't received postnatal care, and children of uneducated women are more likely not to be receiving postnatal care (17.0%). Among those children who received postnatal care, slightly above one third (36.8%) of them received care after hours from delivery, and about one quarter (24.5%) received it after days, as shown in Table 3.20. Minor differences between women of different age, different education level, and different place of residence concerning the timing of the first postnatal checkup for the newborns were observed. Table 3.20 also shows that children received postnatal care from a certified nurse were more likely to have it after days from delivery (63.8%) or hours (28.6%), while those who received it from a health raeeda (CHW) were more likely to have it after days from delivery (75.0%) or weeks (16.7%).

Table 3.20: Timing of first postnatal checkup for the newborn

Background characteristic	Time after birth of newborn's first postnatal checkup				No postnatal checkup	Total	Number of births
	Hours	Days	Weeks	Don't know/ Missing			
Women Age							
Less than 20	39.3	21.3	8.6	21.1	9.7	100.0	361
20-24	35.3	24.9	11.5	17.4	11.0	100.0	2051
25-34	38.1	25.2	9.6	16.9	10.2	100.0	2906
35+	34.8	24.5	13.9	14.8	12.0	100.0	526
DK/Missing	35.4	17.5	10.3	24.7	12.2	100.0	263
Health provider							
Doctor	56.7	23.4	17.1	2.8	---	100.0	3346
Certified Nurse	28.6	63.8	4.7	3.0	---	100.0	878
Health Raeeda (CHW)	6.4	75.0	16.7	1.9	---	100.0	156
Trained Birth Attendant (Midwife)	66.2	26.5	1.5	5.9	---	100.0	68
Health Advisor (Vistor)	50.0	25.0	0.0	25.0	---	100.0	4
Relatives/Friends	60.0	0.0	0.0	40.0	---	100.0	45
No One	---	---	---	---	100.0	100.0	652
Missing							958
Region by intervention							
Upper Egypt							
Intervention	37.0	19.3	9.5	23.1	11.0	100.0	1530
Control	39.1	23.9	10.7	18.8	7.5	100.0	1529
	<i>p-values</i>	0.000					
Lower Egypt							
Intervention	32.9	26.9	12.0	17.1	11.1	100.0	1519
Control	38.3	27.7	9.9	11.0	13.1	100.0	1529
	<i>p-values</i>	0.000					
Education							
No education	33.6	20.9	9.3	19.2	17.0	100.0	905
Primary or some primary (1-<=9)	37.3	24.5	11.1	18.2	8.9	100.0	1019
Some secondary or more (10+)	37.9	25.4	11.0	16.0	9.7	100.0	3864
DK/Missing	31.7	23.2	6.9	27.9	10.3	100.0	319
Total	36.8	24.5	10.5	17.5	10.7	100.0	6107

Knowledge of Newborn Illness Danger Signs

Women were asked to list the danger signs of illness of newborns. Only 7.6% of women stated that they do not know any of these signs. Among those who know, yellow palms/soles/eyes was the highly listed sign (65.7%), followed by swollen abdomen (26.1%), fever (25.9%), and coldness (16.8%). About 16.3% has added other signs; mainly diarrhea and cough, as shown in Table 3.21.

Women of age less than 20 are less likely to know about the signs of newborn illness (11.6%) compared with women of other ages. Generally, the older the woman, the more likely she lists signs, except for coldness and swollen abdomen signs. For these two signs, the older the woman, the less likely she listed them, as shown in Table 3.21. No significant difference was observed among different levels of education.

In Lower Egypt, percent of women in control districts that do not know about any sign of illness (4.9%) is way less than that of those in intervention districts (10.3%), as shown in Table 3.21. Among those who know, women in control districts are more remarkably to mention yellow palms/soles/eyes (70.8%) and to add other signs of illness, e.g. diarrhea and cough, (11.8%) than those in intervention districts, 59.4% and 7.5% respectively. In Upper Egypt however, minor different were observed.

Results in Table 3.21 show that those who delivered at a public facility are significantly more likely to mention convulsions (11.4%), and less likely to mention yellow palms/soles/eyes (53.7%) and swollen abdomen (19.3%), compared with other women. Moreover, those who didn't have ANC during pregnancy have significantly higher awareness of the signs of yellow palms/soles/eyes (72.3%), and swollen abdomen (36.2%) than those who had ANC during pregnancy. Moreover about one quarter of them added diarrhea and cough as other signs of illness. Those who were assisted in delivery by a traditional birth attendant are more likely to mention poor suckling/ feeding (12.1%) and less likely to mention yellow palms/soles/eyes (51.9%), compared with other women.

Table 3.21: Women's knowledge of newborn illness danger signs

Background characteristic	Don't Know	Newborn Illness Danger Signs										Number of women with knowledge of signs	Number of women
		Convulsions	Fever	Poor suckling or feeding	Fast / difficult breathing	Baby feels cold	Yellow plams / skin/ eyes	Swollen abdomen	Unconscious	Pus or redness of the umbilical stump, eyes or skin	Other*		
Women Age													
Less than 20	11.6	3.8	18.5	5.6	2.2	16.3	64.3	28.5	3.1	0.0	15.0	319	361
20-24	7.4	3.1	24.3	8.4	5.4	18.5	65.4	29.2	3.9	0.9	15.6	1888	2039
25-34	7.0	2.2	26.6	7.5	6.5	15.7	66.5	25.0	4.8	2.9	16.4	2691	2892
35+	6.3	4.5	33.5	9.3	5.9	10.8	75.3	20.1	4.3	2.4	16.2	493	526
DK/Missing	13.0	3.2	25.0	4.5	8.6	29.5	40.0	23.6	3.6	3.6	22.3	220	253
Place of Delivery													
Hospital	9.1	2.5	26.5	7.0	6.7	16.8	67.8	19.3	4.1	2.8	19.3	1707	1877
Public Sector	9.6	11.4	19.5	6.5	1.6	17.1	53.7	33.3	4.9	6.5	14.6	123	136
Private Sector	6.5	1.9	24.4	7.5	5.4	16.7	66.9	30.3	4.4	1.2	14.3	3108	3325
Home	7.7	6.6	31.9	11.1	7.1	16.2	57.4	23.5	4.6	3.4	18.7	648	702
Missing													31
ANC Visits													
None	0.0	4.3	34.0	0.0	6.4	19.1	72.3	36.2	6.4	6.4	25.5	47	47
1-3	7.9	2.9	35.5	10.5	4.6	15.4	63.2	24.7	6.1	2.7	15.3	865	939
4 or more	7.2	2.9	24.1	7.7	6.2	17.5	66.9	26.0	4.2	1.7	16.4	4243	4573
Don't Know	10.8	2.0	23.9	3.1	4.5	12.1	62.5	29.6	1.7	3.4	16.6	355	398
Missing													114
Delivery assistant													
Doctor	7.4	2.0	25.3	7.2	5.9	16.6	67.1	26.4	4.3	1.8	16.0	4836	5222
Traditional Birth Attendant	8.7	8.9	31.5	12.1	5.6	17.8	51.9	22.2	6.1	1.4	13.6	428	469
Certified Nurse	6.8	6.0	28.4	6.9	9.1	15.1	58.2	29.3	4.3	8.2	23.7	232	249
Other	15.0	4.7	23.5	9.4	3.5	22.4	71.8	17.6	0.0	3.5	27.1	85	100
Missing													31

*Includes severe diarrhea and coughing



Table 3.21: Women's knowledge of newborn illness danger signs (Contd.)

Background characteristic	Don't Know	Newborn Illness Danger Signs										Number of women with knowledge of signs	Number of women
		Convulsions	Fever	Poor suckling or feeding	Fast / difficult breathing	Baby feels cold	Yellow palms / soles/ eyes	Swollen abdomen	Unconscious	Pus or redness of the umbilical stump, eyes or skin	Other*		
Region by intervention													
Upper Egypt													
Intervention	9.1	4.3	30.4	6.5	7.2	12.1	64.5	20.7	2.2	3.6	20.1	1386	1525
Control	6.1	1.7	30.8	7.5	4.8	16.0	67.7	24.7	4.6	1.9	25.4	1432	1525
<i>p-values</i>	0.002	0.000	0.841	0.276	0.007	0.003	0.070	0.011	0.000	0.005	0.001		
Lower Egypt													
Intervention	10.3	3.6	21.5	6.8	7.0	20.5	59.4	29.0	4.5	1.6	7.5	2818	1502
Control	4.9	1.9	20.8	10.0	4.7	18.6	70.8	30.0	5.9	1.1	11.8	1348	1519
<i>p-values</i>	0.000	0.004	0.659	0.003	0.008	0.216	0.000	0.551	0.106	0.298	0.000		
Education													
No education	9.7	2.7	26.9	7.5	4.4	16.8	64.7	23.2	4.5	2.2	17.8	814	901
Primary or some primary (1-<=9)	9.7	2.9	25.4	8.2	5.8	16.2	64.4	23.8	2.3	3.1	19.7	916	1014
Some secondary or more (10+)	5.9	2.7	26.3	7.8	6.4	16.9	66.4	27.2	4.9	1.7	15.8	3616	3842
Don't Know/Missing	15.6	5.3	19.2	6.0	4.5	17.7	64.5	29.1	3.4	2.6	6.0	265	314
Total	7.6	2.8	25.9	7.7	5.9	16.8	65.7	26.1	4.3	2.0	16.3	5611	6071

*Includes severe diarrhea and coughing

3.4 CHILD HEALTH

The women survey collected information on the prevalence and treatment of diarrhea and acute respiratory infections, illnesses that are among the most common causes of childhood deaths in Egypt. Promoting treatment of diarrhea and acute respiratory infection is one of the important aspects of child's health.

3.4.1 Prevalence and Treatment of Acute Respiratory Infections

The Acute Respiratory Infection (ARI), pneumonia is a common cause of death among infants and young children. Mothers were asked whether their children had cough and fast/difficult breathing during the two-week period prior to the survey. This subsection presents the data collected by the women survey on the prevalence and treatment of ARI. Based on the results presented in Table 3.22, 31.8% of children suffered from the symptoms of ARI during the two-week period prior to the survey. Differentials in the proportion of children with ARI by age of the child show that the highest rate of illness was among children 6-11 months (34.0%), followed by children 12-23 months (32.8%), and children under 6 months (26.9%). No significant difference in the proportion of children with ARI by gender and education. Based on place of residence, only significant difference occurs between control and intervention districts in Lower Egypt, where the proportion of children ill with ARI in control districts (35.3%) is higher than that in the intervention districts (29.2%).

Among children ill with ARI symptoms, data show that 44.2% were given medical treatment by a health provider. Those who were most likely to receive medical care included the children of age 6 – 23 (about 49%), children in intervention districts in Upper Egypt (54.9%), and children whose mother had primary or some primary education (54.8%).

Table 3.22: Prevalence and treatment of symptoms of ARI in the last 2 weeks

Background characteristic	Among children less than 24 months		
	Percentage with coughing	Percentage with coughing and difficult breathing	Percentage for whom advice or treatment was sought from a health facility or provider
Age of child in months			
<6	54.6	26.9	45.9
6-11	65.4	34.0	49.9
12-23	64.3	32.8	49.3
Sex			
Male	63.1	32.4	48.8
Female	61.5	31.0	48.8
Region by intervention			
Upper Egypt			
Intervention	60.5	31.1	54.9
Comparison	63.4	31.6	48.4
<i>p-values</i>	0.103		0.001
Lower Egypt			
Intervention	59.3	29.2	45.7
Comparison	66.2	35.3	46.1
<i>p-values</i>	0.000		0.847
Education			
No education	63.7	33.4	48.0
Primary or some primary (1-<=9)	61.7	31.9	54.8
Some secondary or more (10+)	62.8	31.8	47.7
Missing/DK	54.5	27.1	43.8
Total	62.3	31.8	44.2

3.4.2 Diarrhea

In the women survey, mothers were asked whether their children had diarrhea during the two-week period prior to the survey. If the child had diarrhea, the mother was asked about feeding practices during the diarrhea episode and the actions that were taken to treat the diarrhea.

Prevalence of Diarrhea

Overall, about half of children (50.3%) were reported as having had diarrhea in the two week period prior to the survey. Table 3.23 shows that those who were most likely ill included the children of age 12 – 23 (53.3%), and children whose mother had primary or some primary education (56.7%) or had no education at all (55.0%).

Table 3.23: Prevalence and treatment of symptoms of Diarrhea in the last 2 weeks

Background characteristic	Among children less than 24 months	
	Percentage with symptoms of diarrhea	Percentage of children with diarrhea for whom advice or treatment was sought from a health facility or provider
Age of child in months		
<6	47.6	80.2
6-11	51.6	84.5
12-23	53.3	85.1
Sex		
Male	50.4	83.5
Female	52.6	84.4
Region by intervention		
Upper Egypt		
Intervention	54.5	82.5
Control	52.8	83.6
<i>p-values</i>	0.343	0.457
Lower Egypt		
Intervention	48.8	85.1
Control	49.9	84.6
<i>p-values</i>	0.529	0.682
Education		
No education	55.0	85.4
Primary or some primary (1-<=9)	56.7	84.2
Some secondary or more (10+)	49.9	83.7
Missing/DK	45.0	81.7
Total	50.3	84.0

The women survey results indicate that effort was made to treat the diarrhea in most episodes in young children. With regards to specific actions taken when a child was ill with diarrhea, mothers sought advice or treatment from a health provider or facility in 84.0% of the diarrhea episodes. Minor differences can be observed among different child ages, mother education, gender, and place of residence, as shown in Table 3.23.

Treatment

According to the results shown in Table 3.24A, only 4.2% of children ill with diarrhea hadn't received any treatment, with those who were most likely not to be receiving treatment included children of age under 6 (9.0%), and children in intervention districts in both Upper Egypt (5.0%) and Lower Egypt (5.8%). Among those who received treatment, around 35% received oral dehydration therapy (either ORS packets or pre-packaged ORS fluid) in order to prevent dehydration, and slightly above quarter received pill or syrup zinc. About 30% of women added other treatments; mainly Antinal tablets.

Table 3.24A: Diarrhea Treatment

Background characteristic	Treatment								No treatment	Number of children with diarrhea and got treatment	Number of children
	Fluid from ORS packet or pre-packaged ORS fluid	Home-made fluids	Pill or Syrup, Zinc	Pill or Syrup, Not Zinc	Injection	(IV) intravenous	Home remedies/ Herbal medicines	Other (Antinal tablets)			
Age of child in months											
<6	34.8	5.4	25.1	7.8	9.5	0.5	6.1	32.5	9.0	800	879
6-11	33.7	7.5	27.9	6.6	13.4	0.5	4.1	29.9	4.8	1303	1369
12-23	36.4	6.4	26.4	8.9	14.1	0.5	3.8	29.5	2.0	2198	2243
Missing											22
Sex											
Male	36.2	5.9	27.2	8.4	13.8	0.5	4.4	29.3	4.1	2226	2322
Female	34.3	7.2	26.1	7.5	12.2	0.4	4.1	31.2	4.3	2086	2180
Missing											11
Region by intervention											
Upper Egypt											
Intervention	36.3	4.5	20.4	11.1	12.6	0.8	3.8	35.7	5.0	1039	1094
Control	31.5	6.7	29.4	5.2	15.5	0.6	4.5	38.1	3.2	1081	1117
p-values	0.021	0.032	0.000	0.000	0.052	0.541	0.368	0.251	0.032		
Lower Egypt											
Intervention	38.1	7.5	26.8	9.8	11.0	0.4	4.6	17.5	5.8	1059	1124
Control	35.4	7.3	29.6	6.0	12.8	0.2	4.2	29.3	2.9	1144	1178
p-values	0.197	0.916	0.142	0.000	0.215	0.358	0.622	0.000	0.001		
Education											
No education	36.5	5.8	23.3	10.0	15.5	0.2	3.3	27.1	3.0	657	677
Primary or some primary (1-<=9)	36.9	6.3	24.2	7.7	16.1	1.1	3.8	30.9	5.3	716	756
Some secondary or more (+10)	34.2	6.8	28.6	7.0	11.5	0.3	4.6	31.8	3.9	2751	2863
DK/Missing	41.2	6.0	20.6	15.1	14.1	1.0	4.5	14.1	8.3	199	217
Total	35.3	6.5	26.7	8.0	13.0	0.5	4.3	30.1	4.2	4323	4513

No significant difference is observed among gender and child age, except that children of age under 6 are less likely to be treated with injections (9.5%) compared with children of age 6-23 (about 14%). According to mothers' education level, children whose mothers are uneducated are more likely to be treated with pill or syrup zinc (10.0%) than those whose mothers are educated (about 7.0%). Children whose mother completed some secondary education or more are more likely to be treated with pill or syrup zinc (28.6%) and less likely to be treated with injections (11.5%), compared with other children whose mothers are of different education level, as shown in Table 3.24A.

In Upper Egypt, children in intervention districts are significantly more likely to be treated with pill or syrup zinc (11.1%) compared with 5.2% in control districts, and less likely to be treated with pill or syrup zinc (20.4%) compared with 29.4% in control districts. In Lower Egypt, the remarkable significant difference between intervention districts and control districts is that those in control districts are more likely to be treated with anti natal tablets (29.3%) compared with those in intervention districts (17.5%).

Table 3.24B: Proper Treatment of diarrhea

Background characteristic	Among children less than 24 months	
	Percentage with proper diarrhea treatment	Number of children
Age of child in months		
<6	51.8	1337
6-11	56.4	1816
12-23	59.7	2869
Sex		
Male	57.4	3149
Female	56.1	2940
Region by intervention		
Upper Egypt		
Intervention	57.6	1530
Comparison	51.5	1529
<i>p-values</i>		
Lower Egypt		
Intervention	57.2	1519
Comparison	60.7	1529
<i>p-values</i>		
Education		
No education	58.5	905
Primary or some primary (1-<=9)	57.7	1019
Some secondary or more (10+)	56.2	3864
Missing/DK	56.1	319
Total	56.8	6107

Appropriate care for diarrhea includes continue the child's regular diet and give more liquids, offer additional breast milk or formula to infants, and use an oral rehydration solution (ORS) to replace lost fluids in non-dehydrated children. Table 3.24B shows that only 56.8% of children with diarrhea in the

last two weeks were given appropriate care. Children with age >11 months are more likely than other children to receive appropriate diarrhea care. No significance differences were observed according to child sex and mother education.

Feeding Practices

It is recommended that a child with diarrhea should be given more amounts of fluids and offered more food than normal or at least continues to be fed the same amounts as usual. Tables 3.25A – 3.25C present the practices followed with the child during diarrhea concerning breastfeeding, eating, and fluids offered. Among children with diarrhea, about 41.7% were breastfed as usual, 40.9% were breastfed less than usual, 34.9% offered more fluids than usual, and 43.4% offered more food than usual.

Concerning breastfeeding practices, Table 3.25A shows that the children with diarrhea of age under 6 are more likely to be breastfed as usual (47.5%) than older children, especially of age 12-23 (39.4%). In Upper Egypt, children with diarrhea in intervention districts are significantly more likely to be breastfed as usual (44.9%) than those in control districts (38.6%), while those in control districts are significantly more likely to be breastfed less than usual (47.6%) than those in intervention districts (36.7%). No significant difference was found in Lower Egypt. Also, no major differences were found in breastfeeding practices by gender and mothers' education level.

Table 3.25-A: Feeding practices during diarrhea

Background characteristic	Breastfeeding				Total	Number of children with diarrhea
	More than usual	Same as usual	Less than usual	No Breastfeeding		
Age of child in months						
<6	6.4	47.5	38.7	7.4	100.0	1037
6-11	5.1	41.7	43.4	9.9	100.0	1618
12-23	6.4	39.4	40.2	14.0	100.0	2616
Missing						25
Sex						
Male	5.8	42.8	40.0	11.4	100.0	2723
Female	6.1	40.6	41.8	11.5	100.0	2559
Missing						14
Region by intervention						
Upper Egypt						
Intervention	6.0	44.9	36.7	12.3	100.0	1320
Control	4.4	38.6	47.6	9.4	100.0	1310
<i>p-values</i>	0.000					
Lower Egypt						
Intervention	7.7	39.9	39.6	12.7	100.0	1292
Control	5.7	43.2	39.7	11.4	100.0	1374
<i>p-values</i>	0.091					
Education						
No education	5.2	41.9	43.0	9.8	100.0	804
Primary or some primary (1 - <=9)	5.8	41.2	40.8	12.2	100.0	895
Some secondary or more (10+)	6.0	41.9	40.4	11.7	100.0	3329
DK/Missing	8.2	39.6	41.4	10.8	100.0	268
Total	5.9	41.7	40.9	11.5	100.0	5296

Concerning offering fluids during diarrhea, results in Table 3.25B show that fluids were more likely to be increased for those of age 12-23 (39.5%) compared with younger children, especially those of age under 6 (20.9%). Also women with some secondary education were more likely to increase fluids to the sick child (36.9%) than those with lower education, especially those with no education (28.8%). No major significant difference was observed in Lower Egypt. However, in Upper Egypt, women in control districts were more likely to increase the amount of offered fluids (35.7%) than those in intervention districts (28.9%). Practices followed with the child during diarrhea concerning fluids offered do not significantly differ whether the child is male or female.

Table 3.25-B: Feeding practices during diarrhea

Background characteristic	Fluids during Diarrhea						Number of children with diarrhea
	Less than usual	Same as usual	More than usual	Nothing to Drink	DK	Total	
Age of child in months							
<6	21.9	20.5	20.9	32.0	4.8	100.0	1051
6-11	26.6	22.6	36.3	12.5	2.0	100.0	1614
12-23	24.4	23.2	39.5	10.6	2.2	100.0	2630
Missing							24
Sex							
Male	24.3	21.4	35.7	15.8	2.8	100.0	2725
Female	24.9	23.6	34.1	14.9	2.6	100.0	2581
Missing							13
Region by intervention							
Upper Egypt							
Intervention	27.5	26.7	28.9	14.5	2.4	100.0	1331
Control	26.3	22.6	35.7	14.5	1.0	100.0	1317
<i>p-values</i>	0.000						
Lower Egypt							
Intervention	23.1	20.1	35.3	16.2	5.4	100.0	1300
Control	21.7	20.5	39.6	16.3	2.0	100.0	1371
<i>p-values</i>	0.000						
Education							
No education	29.1	25.5	28.8	14.9	1.7	100.0	805
Primary or some primary (1 - <=9)	26.4	23.3	33.6	14.9	1.8	100.0	900
Some secondary or more (10+)	23.3	21.5	36.9	15.5	2.8	100.0	3342
DK/Missing	21.3	22.8	32.4	16.2	7.4	100.0	272
Total	24.6	22.5	34.9	15.4	2.7	100.0	5319

Results in Table 3.25C show that practices followed with the child during diarrhea concerning food offered do not significantly differ by the child gender, mothers' education level, or place of residence. However, it was noticed that children of age 12-23 were way more likely to be offered less food than usual (51.1%) compared with younger children, especially those of age under 6 (25.2%).

Table 3.25-C: Feeding practices during diarrhea

Background characteristic	Eating during Diarrhea						Number of children with diarrhea
	Less than usual	Same as usual	More than usual	Nothing to Eat	DK	Total	
Age of child in months							
<6	25.2	12.1	2.5	55.8	4.4	100.0	1048
6-11	42.3	16.3	2.5	37.3	1.6	100.0	1623
12-23	51.1	15.9	1.8	29.2	2.0	100.0	2650
Missing							25
Sex							
Male	44.4	14.3	1.9	37.2	2.3	100.0	2746
Female	42.3	16.4	2.4	36.5	2.4	100.0	2586
Missing							14
Region by intervention							
Upper Egypt							
Intervention	44.6	17.6	1.7	34.2	2.0	100.0	1333
Control	47.5	11.3	1.5	39.4	0.3	100.0	1321
<i>p-values</i>	0.000						
Lower Egypt							
Intervention	39.6	15.8	3.7	35.5	5.3	100.0	1313
Control	42.0	16.3	1.7	38.1	1.8	100.0	1379
<i>p-values</i>	0.000						
Education							
No education	41.7	16.7	2.0	38.0	1.6	100.0	806
Primary or some primary (1 - <=9)	43.0	15.3	1.9	37.8	2.0	100.0	901
Some secondary or more (10+)	44.2	14.5	2.2	36.8	2.3	100.0	3368
DK/Missing	40.6	19.6	3.3	30.6	5.9	100.0	271
Total	43.4	15.3	2.2	36.8	2.3	100.0	5346

Women survey results also showed that 18.5% of children were given increased fluids and continued feeding, and 17.0% continued feeding and were given ORS and/or increased fluids with the same food, as shown in Table 3.25D.

Table 3.25-D: Feeding practices during diarrhea

Background characteristic	Percentage given increased fluids and continued feeding	Percentage who continued feeding and were given ORS and/or increased fluids with the same food	Number of children with diarrhea
Age of child in months			
<6	12.5	16.0	1037
6-11	18.5	16.7	1618
12-23	20.8	17.6	2616
Missing			25
Sex			
Male	19.2	16.8	2723
Female	17.8	17.3	2559
Missing			14
Region by intervention			
Upper Egypt			
Intervention	16.0	18.0	1320
Control	16.3	13.1	1310
<i>p-values</i>	0.848	0.000	
Lower Egypt			
Intervention	19.0	18.7	1292
Control	22.5	18.3	1374
<i>p-values</i>	0.028	0.758	
Education			
No education	15.4	17.7	804
Primary or some primary (1 - <=9)	16.8	17.0	895
Some secondary or more (10+)	19.8	16.7	3329
DK/Missing	17.5	19.4	268
Total	18.5	17.0	5296

During the period of recovering from diarrhea, 48.7% of women reported giving their children less amount of food than usual, and slightly above quarter (25.7%) reported giving them the same amount as usual. Based on the results in Table 3.26, children of age 12-23 are significantly more likely to be fed less than usual during recovery (54.8%) compared with younger children, especially those of age under 6 (32.2%). Children whose mothers completed some secondary education are significantly less likely to be fed the same as usual (23.2%) compared with children whose mothers are of lower education levels.

Table 3.26: Feeding practices during the period of recovering from diarrhea

Background characteristic	Food during the period of recovering from diarrhea						Number of children with diarrhea
	More than usual	Same as usual	Less than usual	Nothing to eat	DK	Total	
Age of child in months							
<6	1.8	26.1	32.2	32.3	7.6	100.0	926
6-11	3.0	27.1	49.2	17.3	3.5	100.0	1440
12-23	3.8	24.6	54.8	13.8	3.1	100.0	2354
Missing							24
Sex							
Male	3.9	25.5	47.5	19.0	4.1	100.0	2451
Female	2.4	25.8	49.8	17.9	4.0	100.0	2279
Missing							14
Region by intervention							
Upper Egypt							
Intervention	4.4	31.3	42.3	17.2	4.8	100.0	1225
Control	2.2	26.3	51.9	18.0	1.6	100.0	1114
<i>p-values</i>	0.000						
Lower Egypt							
Intervention	3.8	24.3	48.2	17.8	5.9	100.0	1223
Control	2.0	20.7	52.7	20.9	3.6	100.0	1182
<i>p-values</i>	0.000						
Education							
No education	3.6	27.5	46.8	18.5	3.6	100.0	720
Primary or some primary (1-<=9)	3.9	31.6	46.5	14.6	3.4	100.0	797
Some secondary or more (10+)	2.8	23.2	50.1	19.7	4.2	100.0	2984
DK/Missing	2.9	30.9	43.6	16.5	6.2	100.0	243
Total	3.1	25.7	48.7	18.5	4.0	100.0	4744

3.4.3 Hand Washing Practices

The questionnaire included a question for respondents about their hand washing habits. Overall, 91.3% of women wash their hands before food preparation, 85.9% wash their hands before feeding children, and 79.8% wash their hands after defecation, as shown in Table 3.27.

Almost the same pattern is followed by women of different education level and child age. The only clear difference was found among women in control and intervention districts in Lower Egypt. It was noticed that women in control districts are remarkably more likely to wash their hands before food preparation (92.9%), before feeding children (86.9%), and after defecation (83.8%), compared with those in intervention districts; 85.8%, 79.6%, and 72.8%, respectively.

Table 3.27: Hand washing practices

Background characteristic		Hand Washing Practices					
		Never	Before food preparation	Before feeding children	After defecation	Number of Women wash hands	Number of Women
Age of child in months							
	<6	0.9	91.0	85.4	78.6	1339	1351
	6-11	0.7	92.0	85.8	79.3	1752	1765
	12-23	0.6	91.0	86.3	80.6	2782	2799
Region by intervention							
Upper Egypt							
	Intervention	0.7	92.9	87.8	80.0	1491	1501
	Control	0.2	93.4	89.1	82.2	1509	1512
	<i>p-values</i>	0.056	0.601	0.251	0.131		
Lower Egypt							
	Intervention	1.7	85.8	79.6	72.8	1423	1448
	Control	0.3	92.9	86.9	83.8	1477	1481
	<i>p-values</i>	0.000	0.000	0.000	0.000		
Education							
	No education	0.8	93.1	86.2	77.4	884	891
	Primary or some primary (1-<=9)	0.7	91.9	87.4	77.7	985	992
	Some secondary or more (10+)	0.5	91.2	86.1	81.3	3737	3756
	DK/Missing	3.0	85.7	78.6	74.5	294	303
	Total	0.7	91.3	85.9	79.8	5900	5942

3.5 BREASTFEEDING PRACTICES AND NUTRITION STATUS

3.5.1 Initiation of Breastfeeding

According to results presented in Table 3.28, 99.1% of children aged less than 2 years at the time of the survey were reported as having been breastfed. Among the children who were ever breastfed, 30.9% of the children were put to the breast within an hour of delivery, and 77.5% of the children were breastfed within the first day. It is worth mentioning that 87.6% of children received prelacteal feeding during the first 3 days after birth. In both Upper and Lower Egypt, women in intervention districts were more likely to start breastfeeding within an hour of delivery (37.8% in Upper Egypt and 35.1% in Lower Egypt) than those in control districts (27.0% in Upper Egypt and 24.8% in Lower Egypt), as shown in Table 3.28A. No other significant difference was observed.

Table 3.28A: Initial breastfeeding

Background characteristic	Among last-born children born in the past two years					Among last-born children born in the past two years who were ever breastfed:	
	Percentage ever breastfed	Percentage that were given the liquid that came from mother breast within first three days of delivery	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth	Number of last born children	Percentage who received a prelacteal feed	Number of last-born children ever breastfed
Sex							
Male	99.0	87.1	29.6	76.6	3124	62.8	3093
Female	99.2	88.2	32.4	78.4	2908	64.4	2886
Missing					17		17
Region by intervention							
Upper Egypt							
Intervention	99.7	89.2	37.8	78.9	1522	64.9	1517
Control	99.6	86.0	27.0	72.4	1526	73.8	1520
Lower Egypt							
Intervention	98.4	86.8	35.1	81.1	1486	49.2	1462
Control	98.8	88.5	24.8	78.5	1515	65.4	1479
Education							
No education	99.1	87.1	33.1	74.9	904	63.0	896
Primary or some primary (1-<=9)	99.2	85.6	32.6	73.9	1015	63.5	1007
Some secondary or more (10+)	99.1	87.9	29.6	78.5	3816	64.6	3782
DK/Missing	99.0	91.8	35.7	85.0	314	51.7	311
Total	99.1	87.6	30.9	77.5	6049	63.5	5996

As shown in table 3.28B, the percentage of children less than 6 months of age who were exclusively breastfed is 32.5%. The highest percentage of children less than 6 months who exclusively breastfed is in the intervention villages of Lower Egypt (41.9%). No significant differences were observed with regards to the woman education or the child gender.

Table 3.28B: Exclusive breastfeeding

Background characteristic	Among < 6 months children	Among last-born children born in the past two years who were ever breastfed:
	Percentage exclusively breastfed	Number of last-born children ever breastfed
Sex		
Male	33.1	586
Female	31.7	511
Region by intervention		
Upper Egypt		
Intervention	24.4	275
Comparison	28.7	282
Lower Egypt		
Intervention	41.9	284
Comparison	34.9	258
Education		
No education	33.1	163
Primary or some primary (1-<=9)	28.2	170
Some secondary or more (10+)	31.7	715
DK/Missing	54.9	51
Total	32.5	1099

3.5.2 Nutrition Status of Children

The current height and weight obtained in the women survey for young children as well as information on the children's ages were used to construct the following three standard indices of physical growth: height-for-age, weight-for-height, and weight-for-age. Children whose height-for-age measures are below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age, or *stunted*, while those whose measures are below minus three standard deviations (-3 SD) from the reference population are considered *severely stunted*. Children whose weight-for-height measures are below minus two standard deviations (-2 SD) from the median of the reference population are too thin for their height, or *wasted*, while those whose measures are below minus three standard deviations (-3 SD) from the reference population median are *severely wasted*. Children whose weight-for-age measures are below minus two standard deviations (-2 SD) from the median of the reference population are *underweight* for their age, while those whose measures are below minus three standard deviations (-3 SD) from the reference

population median are *severely underweight*. A child can be underweight for his age, because he is stunted, he is wasted, or he is both stunted and wasted. Children whose weight-for-height measures and/or weight-for-age measures are above plus two standard deviations (+2 SD) from the median of the reference population are *overweight*.

Results in Table 3.29 show that 5.3% of children are severely stunted, 11.4% are stunted, 3.2% are severely wasted, 9.8% are wasted, 1.6% are severely underweight, and 8.1% are underweight. Stunting levels significantly increase with the age, in which only 6.9% of children of age under 6 are stunted, whereas this percent increases to 19.2% for children of age 18-23. As for the weight-for-height index, the highest levels of wasting were observed for children under age 11 months (around 12%). As for the weight-for-age index, the highest levels of overweighting were observed for children under age 8 months (about 12%). Other than that, stunting levels, wasting levels, overweight levels, and underweight levels do not significantly vary with the child gender, place of residence, or mothers' education level.

Table 3.29: Nutritional status of children

Background characteristic	Height-for-age			Number of children	Weight-for-height				Number of children	Weight-for-age				Number of children
	Percent-age below -3 SD	Percent-age below -2 SD	Mean Z-score (SD)		Percent-age below -3 SD	Percent-age below -2 SD	Percent-age above +2 SD	Mean Z-score (SD)		Percent-age below -3 SD	Percent-age below -2 SD	Percent-age above +2 SD	Mean Z-score (SD)	
Age of child in months														
<6	3.1	6.9	0.85	841	6.6	12.7	8.0	-0.33	792	2.0	6.9	11.2	0.24	842
6-8	4.8	8.2	0.97	558	2.8	11.4	7.1	-0.27	534	2.0	6.5	11.9	0.08	550
9-11	4.5	10.0	0.46	584	3.8	11.0	7.1	-0.28	552	1.7	10.4	2.8	-0.39	573
12-17	4.6	11.8	-0.15	821	1.3	7.3	7.4	-0.21	789	1.6	7.9	1.5	-0.69	814
18-23	9.4	19.2	-0.83	779	1.3	7.1	8.4	-0.04	705	0.7	8.9	0.9	-0.84	734
Sex														
Male	6.3	12.3	0.06	1861	3.4	10.3	7.6	-0.24	1746	2.0	9.5	4.1	-0.47	1810
Female	4.2	10.4	0.37	1722	2.9	9.1	7.7	-0.21	1628	1.2	6.5	7.0	-0.17	1703
Region by intervention														
Upper Egypt														
Intervention	3.8	9.2	0.17	1065	3.5	8.7	6.1	-0.30	1001	1.7	8.6	4.4	-0.40	1025
Control	6.5	13.2	0.17	1034	2.9	9.5	6.8	-0.27	981	1.5	8.6	6.3	-0.35	996
p-values	0.005	0.004	1.000		0.444	0.504	0.534	0.500		0.783	0.969	0.054	0.261	
Lower Egypt														
Intervention	5.3	10.9	0.35	755	2.0	8.8	9.0	-0.13	701	1.5	6.5	5.4	-0.19	757
Control	5.7	12.5	0.18	720	4.3	11.1	9.7	-0.15	691	1.8	8.2	6.2	-0.35	735
p-values	0.739	0.327	0.001		0.012	0.153	0.650	0.701		0.629	0.210	0.488	0.002	
Mother's Education														
No education	5.0	12.4	0.19	564	3.7	11.0	6.8	-0.31	535	1.5	9.3	4.0	-0.44	550
Primary or some primary (1-<=9)	5.1	9.3	0.11	706	3.0	10.5	8.1	-0.22	668	1.8	7.8	4.8	-0.39	680
Some secondary or more (10+)	5.5	11.6	0.24	2130	3.2	9.1	7.6	-0.20	2002	1.6	7.9	6.0	-0.28	2107
DK/Missing	4.4	13.7	0.33	183	1.8	10.1	8.2	-0.28	169	1.7	7.4	6.3	-0.32	176
Total	5.3	11.4	0.21	3583	3.2	9.8	7.6	-0.22	3374	1.6	8.1	5.5	-0.33	3513

*Percentage below -2SD represents all children with Z-score less than -2 SD (i.e. including -3 SD)



Table 3.30: Sample table for relationship between Stunted and Wasted

Background characteristic	Stunted (-2 SD height for age)			Not stunted			Number of children
	Normal weight	Overweight / Obese (BMI +2 SD and +3 SD)	Number of children	Wasted (-2SD weight for height)	Not wasted or overweight / Obese	Overweight / Obese	
Age of child in months							
<6	55.8	0.0	52	13.5	81.1	5.4	742
6-8	45.9	2.7	37	12.1	83.3	4.6	496
9-11	51.9	0.0	52	12.2	83.7	4.0	497
12-17	63.7	0.0	91	7.6	88.1	4.3	695
18-23	66.7	0.8	126	8.5	86.7	4.9	579
Sex							
Male	57.2	0.0	201	11.4	84.0	4.6	1543
Female	63.7	1.3	157	10.0	85.2	4.7	1466
Region by intervention							
Upper Egypt							
Intervention	48.3	0.0	87	11.4	85.0	4.6	913
Control	60.9	0.9	115	10.4	85.8	3.6	862
<i>p-values</i>	0.073	1.000		0.521	0.611	0.285	
Lower Egypt							
Intervention	59.2	1.4	71	9.8	83.8	6.3	629
Control	71.8	0.0	85	12.4	83.0	4.6	605
<i>p-values</i>	0.097	0.455		0.156	0.703	0.181	
Mother's Education							
No education	60.6	0.0	66	12.4	83.9	3.7	467
Primary or some primary (1-<=9)	60.0	0.0	55	11.0	83.3	5.7	612
Some secondary or more (10+)	60.7	0.5	214	10.2	85.4	4.4	1784
DK/Missing	52.2	4.3	23	11.7	81.5	6.8	146
Total	60.1	0.6	358	10.8	84.6	4.7	3009

Table 3.30 shows the relation between stunted and wasted children. As shown, 60.1% of children who are stunted (-2D height for age) have normal weights. Among children who are not stunted, 84.6% are neither wasted nor overweight/obese, and 10.8% are wasted. Differences can be noticed among different ages of children. Stunted children of age 18-23 are more likely to be of normal weight (66.7%) than younger children, especially those of age 6-8 (45.9%). Not stunted children of age 12-23 are less likely to be wasted (about 8%) than younger children, especially those of age under 6(13.5%).

3.6 WORKING STATUS OF WOMEN AND DECISION MAKING

Aside from their housework, women were asked if they were working outside home. The vast majority of women (87.9%) stated that they are not working outside. As shown in Table 3.31, the percent of women who work outside home increases with the age. For example, only 4.8% of women of age less than 20 confirmed working outside, while the percent increased to 16.6% for those of age 35 or more.

Table 3.31: Working Status of Women and Decision making at Household level for Women's Health Care

Background characteristic	Working status of Women		Total	Number of women	Household Decision Making for Women				Total	Number of women
	Working outside home	Not Working outside home			Women alone	Husband alone	Jointly	In-Laws		
Women Age										
Less than 20	4.8	95.2	100.0	355	19.2	41.3	28.8	10.7	100.0	281
20-24	9.2	90.8	100.0	2005	18.2	40.3	32.9	8.7	100.0	1656
25-34	14.6	85.4	100.0	2850	19.5	40.9	33.1	6.4	100.0	2397
35+	16.6	83.4	100.0	517	22.6	44.1	29.8	3.5	100.0	433
DK/Missing	7.5	92.5	100.0	252	18.1	42.1	31.5	8.3	100.0	216
Region by intervention										
Upper Egypt										
Intervention	10.9	89.1	100.0	1490	21.3	45.9	23.1	9.7	100.0	1344
Control	9.8	90.2	100.0	1505	15.7	44.8	31.6	7.9	100.0	1303
<i>p-values</i>	0.351				0.000					
Lower Egypt										
Intervention	13.8	86.2	100.0	1476	22.0	38.9	32.6	6.4	100.0	1072
Control	13.9	86.1	100.0	1508	18.5	33.9	43.0	4.7	100.0	1264
<i>p-values</i>	0.976				0.000					
Total	12.1	87.9	100.0	5979	19.3	41.1	32.4	7.2	100.0	4983

Women were also asked about the person responsible for deciding how the money will be used. About 41.1% of women stated that the decision is taken by the husband alone, 32.4% stated that the decision is taken jointly by her and the husband, and 19.3% stated that it is taken by her alone. Table 3.31 remarks that the less the age of women, the more likely the in-laws decide how the money should be used. For example, only 3.5% of women of age 35 or more stated that the in-laws are responsible for this decision, while this percent increased to 10.7% for those of age less than 20. In Upper and Lower Egypt, the decision in control districts is more likely to be taken jointly by the husband and wife (31.6% in Upper Egypt and 43.0% in Lower Egypt) than in intervention districts (23.1% in Upper Egypt and 32.6% in Lower Egypt).

MEN QUANTITATIVE SURVEY

The men survey eligible respondents were those who have ever been married with a child of age less than two years. The survey collected data as well from men who have ever been married with or without children, of any age. The survey focused mainly on the respondents' knowledge of family planning for all men and children health only for those who have children of age under 2. This chapter is devoted for presenting the men survey results.

3.7 EXPOSURE OF MEN TO MEDIA MESSAGES ABOUT FAMILY PLANNING

Men were asked whether they had heard anything about family planning from broadcast media (television or radio) or printed media (Newspaper). Table 3.32 shows that television is mainly the source of information about family planning (96.5%), followed by the radio (33.3%) then newspaper (25.9%).

In Upper Egypt, men in intervention districts are more likely to hear about family planning through newspaper (25.8%) than those in control districts (20.0%). In Lower Egypt, men in control districts are more likely to hear about family planning from TV (96.5%) than those in intervention districts (91.7%), as shown in Table 3.32.

Table 3.32: Exposure to Media messages about family planning
Percentage of men with who heard media messages on family planning, by background characteristics

Background characteristic	Media			Number exposed to at least one media message	Number of men
	Radio	TV	Newspapers		
Region by intervention					
Upper Egypt					
Intervention	29.3	97.8	25.8	827	1514
Control	25.0	98.9	20.0	725	1519
<i>p-value</i>	0.068	0.131	0.006		
Lower Egypt					
Intervention	44.4	91.7	28.9	615	1518
Control	39.1	96.5	28.9	460	1519
<i>p-value</i>	0.049	0.002	0.443		
Total	33.3	96.5	25.9	2627	6060

3.8 KNOWLEDGE OF MEN OF FAMILY PLANNING

Men were asked whether they had ever heard about family planning methods. About 98.4% of men confirmed their hearing. Of most methods heard about are the pills (97.6%), IUD (95.8%), and injectables (93.6%), as shown in Table 3.33A.

In Upper Egypt, men in intervention districts are significantly more likely to be hearing of traditional methods than men in control districts. That is, 48.1% of men in intervention districts had heard of rhythm compared with 38.2% of those in control districts, and 45.8% of men in intervention districts had heard of withdrawal compared with 41.1% of those in control districts.

In Lower Egypt, however, men in control districts were generally of higher knowledge of family planning method, modern and traditional, than those in intervention districts. As shown in Table 3.33A, men in control districts are more likely to know about male condom (69.8%), LAM (58.5%), and withdrawal (47.0%) than those in intervention districts; 61.5%, 49.7%, and 42.0%, respectively.

Table 3.33A: Knowledge of Family Planning Methods

Percentage of men who have heard of at least one FP method by place of residence

Background characteristic	Any method	Modern method						Traditional method		No method	Number of men
		IUD	Injectables	Pills	Male condom	LAM*	Other	Rhythm	Withdrawal		
Region by intervention											
Upper Egypt											
Intervention	98.0	95.6	96.5	97.5	70.5	57.2	4.0	48.1	45.8	2.0	1520
Control	97.6	96.8	95.1	98.5	68.6	55.9	3.2	38.2	41.1	2.4	1522
p-value	0.540	0.087	0.048	0.052	0.247	0.484	0.241	0.000	0.009	0.540	
Lower Egypt											
Intervention	99.2	94.2	89.9	96.6	61.5	49.7	5.7	43.7	42.0	0.8	1520
Control	98.9	96.7	93.0	97.9	69.8	58.5	3.6	46.4	47.0	1.1	1523
p-value	0.450	0.001	0.002	0.026	0.000	0.000	0.006	0.129	0.005	0.450	
Total	98.4	95.8	93.6	97.6	67.6	55.3	4.1	44.1	44.0	1.6	6085

*In the DHS, LAM (natural breastfeeding) was treated as a traditional method, while in this table it was treated as a modern method

Table 3.33B: Spacing Interval

Percentage of men with last child (<24 months) according to their spacing preferences

Background characteristic	Interval preferred by men			Number of men with last child <24	
	<=2 years	>2 years	Do not need another child		
Region by intervention					
Upper Egypt					
Intervention	43.7	27.4	28.9	1514	
Comparison	47.0	25.1	27.9	1521	
<i>p-value</i>					
Lower Egypt					
Intervention	38.6	34.8	26.6	1516	
Comparison	45.2	27.1	27.7	1521	
<i>p-value</i>					
Total	43.7	28.6	27.8		

Table 3.33B shows that the percentage of men who preferred to have another child after 2 years or more is only 28.6%, while those who do not need another child is 27.8%. Very minor differences were observed in the spacing preferences of men in the different geographical locations as shown in table 3.33B.

Table 3.33C: Family Planning Awareness

Percentage of men with last child (<24 months) who received at least one FP session from a health worker

Background characteristic	Percent of men received FP session	Number of men with last child <24
Region by intervention		
Upper Egypt		
Intervention	17.2	1517
Comparison	16.9	1523
<i>p-value</i>		
Lower Egypt		
Intervention	11.8	1521
Comparison	6.2	1523
<i>p-value</i>		
Total	9.0	6084

Table 3.33C shows that the percentage of men who received a family planning session by a health worker in the 3 months preceding the survey is only 9.0%. Men in the intervention villages in Upper Egypt are more likely to have received this session (17.2%).

3.9 ROLE OF MEN DURING PREGNANCY

Men with children of age under 2 were asked whether the mother of the child had ANC visits during her last pregnancy. About 89.3% of men confirmed having ANC visits, among which 65.4% had been with their wives during these visits. Also, 76.0% of men reported that their children were delivered at a hospital, as shown in Table 3.34.

In Upper Egypt, men in intervention districts are more likely to have their children been delivered at a hospital (80.9%) than those in control districts (70.9%), and to be with their wives during ANC visits (63.0%) than those in control districts (59.2%).

In Lower Egypt, the only difference between men in control and intervention districts is that men in intervention districts are highly more likely to be with their wives during ANC visits (96.0%) than those in control districts (70.2%).

Table 3.34: Delivery of last birth

Percentage of men with last child (<24 months) delivered in a hospital, by background characteristics

Background characteristic	Baby delivered in a hospital	Mother had ANC visits with a doctor during pregnancy	Husband went with her during ANC visits	Number of men with last child <24
Region by intervention				
Upper Egypt				
Intervention	80.9	87.1	63.0	1503
Control	70.9	85.0	59.2	1514
<i>p-value</i>	0.000	0.098	0.031	
Lower Egypt				
Intervention	49.1	92.8	69.0	1499
Control	49.9	92.2	70.2	1514
<i>p-value</i>	0.673	0.539	0.000	
Total	76.0	89.3	65.4	6003

3.10 KNOWLEDGE OF MEN DEALING WITH SICK CHILD

Men with children of age under 2 were asked about their opinion about the quantity of liquids that should be given to the child during diarrhea. Results in Table 3.35 show that 45.0% of the men do not know, about one quarter (25.1%) think child should be given more liquid than usual, and 19.6% think that child should be given same amount of liquid as usual.

As shown in Table 3.35, no significant difference was noticed among men's opinion in Upper Egypt. However, in Lower Egypt, men in control districts are more likely to not being know the appropriate amount of liquid that should be given to the child during diarrhea (47.8%), compared with those in intervention districts (39.8%), and if they know, they are less likely to say that it should be more than usual amount (25.5%) versus 31.9% in intervention districts.

Table 3.35: Knowledge of dealing with a child with diarrhea

Percentage of men according to their opinion about the quantity of liquids that should be given to the child during diarrhea by place of residence

Background characteristic	Liquids should be given					Number of men
	More than normal	Same as Normal	Less than normal	Nothing to drink	Do not know	
Region by intervention						
Upper Egypt						
Intervention	21.7	22.8	9.2	1.5	44.8	1515
Control	21.3	21.2	9.2	0.8	47.5	1510
<i>p-value</i>	0.283					
Lower Egypt						
Intervention	31.9	16.8	10.5	1.1	39.8	1511
Control	25.5	17.5	8.0	1.2	47.8	1520
<i>p-value</i>	0.000					
Total	25.1	19.6	9.2	1.1	45.0	6006

4. QUALITATIVE ASSESSMENT

LOWER EGYPT

4.1 SHARQYIA GOVERNORATE

4.1.1 Mothers

Healthcare Services

A focus group discussion was held at the Center Point of Abu Hamad with mothers who have children less than two years old from the village of El Abbasa Al Kobra. The participants belong to the age bracket of 20 to 45 years old and are all inhabitants of the village. In addition, approximately 11 mothers have attended the focus group discussion from the village of Shobra El Nakhla in Sharqyia Governorate. Mothers stated that antenatal care services are available at private clinics nearby both villages, Belbees general hospital, and the Health Care units of both villages. Regarding the health care units, they provide antenatal care check-ups, weighing scales, and Tetanus injections; but there are no equipped facilities for delivery operations. Mothers complain about receiving a Tetanus shot, not matter what their medical diagnosis is. Few mothers stated that there is no sonar device at the Health care unit while others said that there is sonar device but is used according to the health condition of the pregnant woman. From another side, the general hospital lacks cleanliness and has a shortage of physicians that result in many different and unorganized appointments. When the practitioners are available the quality of care they provide is very poor and the check-up fee is approximately EGP30. In addition, private clinics provide better healthcare services than the healthcare units and the general hospital because they have laboratory analysis, X-rays, medications and blood pressure measurements. The check-up fee at the villages' nearby private clinics is EGP25 and the antenatal care visit fee is EGP50. The check-up fee at private clinics in El Zaqaziq costs EGP90 and they are located three hours away from Shobra El Nakhla village. In addition to that, according to the mothers, there is a priority in their medical expenditures directed to their children and especially the newborns because of their fragility and vulnerability. For example, if the newborn suffers from diarrhea, anemia or needs medical analysis, mothers must buy the medicine or perform the requested medical analysis (at a private clinic outside the village because the medical reports of the general hospital are often inaccurate). Mothers are even afraid to extract a tooth at the general hospital because of its lack of sanitation and the excessive spread of infection. Thus, the Health Care service provider is chosen based on the physician's reputation and the mother and children's health condition. Mothers stated that family members prefer to conduct check-up visit at healthcare providers located outside of village.

Mother and Fetal Health during Pregnancy

During pregnancy, mothers agreed that a usual schedule for their antenatal care visits would be once every month or every two months; however, they assumed that they should conduct antenatal care visits three times during the ninth month of pregnancy. Unanimously, all of them followed their pregnancy with a practitioner. One of the mothers implied that her antenatal care visits were on a weekly basis because she has diabetes. Husbands and wives decide in agreement the suitable healthcare provider for the antenatal care visits. Dangerous indicators during the pregnancy are albumin, severe abdominal cramps, lack of fetal movement, swollen hands and legs, vaginal bleeding, a sudden gush of water, fever and preeclampsia. If any of these symptoms occur, they would have to immediately contact their healthcare provider. All mothers claimed that they took Feroglobin capsules or iron pills that they bought from the pharmacy and sometimes from the Health unit and they believe that the number of capsules they took was reasonable (one per day). None of the mothers complained from constipation while taking iron supplements. Iron pills are available at pharmacies where one bar costs EGP10.

Delivery Operations

The choice of the delivery location is determined by the husband and wife at the beginning of the ninth month of pregnancy and according to the family's financial condition. Some mothers gave birth at Belbes general hospital stating that the health care service was good, while others gave birth through a certified nurse at home. A few mothers also mentioned that they gave birth at a private clinic. Moreover, the practitioner who conducts the delivery operation is the one who follows up with the mother after delivery.

Mother's Health after Delivery

During puerperium, nurses visited some mothers once to provide her and her newborn with the needed care. These visits aim at checking the mother's health condition if the delivery operation was a C-section and offering them birth control pills. Some mothers stated that these visits happened during the first week of delivery and it was a leading rural phenomenon at the time and others said that the visit took place during puerperium. After delivering the baby, mothers agreed that no healthcare provider advised them regarding the right methods of taking care of their newborns. One of the mothers had preeclampsia and the healthcare provider followed up with her to talk about her condition and family planning. All mothers agreed that their husbands usually help taking care of them and their babies and try to provide the needed help such as holding and calming the baby. Health problems that might occur for the mothers within the first two weeks after delivery are, namely; vaginal bleeding, breastfeeding problems (dryness of breast milk), abdominal cramps, and fever. In case any of these symptoms occur, the mother should visit her healthcare provider.

The Newborn's Health

Few mothers mentioned that they were given a blue capsule at the healthcare unit to increase their breast milk. Most participants stated that they revert to a practitioner diagnosis only when their newborns are ill and few mothers go to the pharmacy directly. Mothers give their newborns mint drink first then if the infant is still sick; the baby is taken to the physician for a consult. All mothers agreed that the health problems experienced by their newborn are namely; colic, jaundice, allergy, vomiting, constipation, fever and infection of the umbilical cord (this area should be cleaned 3 times daily). If any of the above symptoms occur, the newborn should be taken immediately to the hospital by anyone available at home. Not all husbands provide their wives with more care during the puerperium. Vaginal bleeding, vomiting, drowsiness, headaches, and fever are the main health issues experienced by mothers after delivery. In case any of these symptoms occur, the mother should visit her healthcare provider.

Diarrhea

According to the mothers, if the newborn suffers from diarrhea, they would immediately take him/her to the general practitioner. Diarrhea occurs if the baby is teething, if there is a high degree of pollution in the area, if the newborn was subjected to any contaminated surfaces, if the newborn suffers from common cold and if the newborn is not exclusively breastfed. Mothers therefore stated that they should warm the baby and pay more attention to his/her hygiene. Mothers agreed that they could decide whether their babies have diarrhea or not through the following symptoms, namely; if the diarrhea happens 6 times a day, shrinkage of abdominal skin, loss of appetite, yellow face, dehydration, skin allergy, and drowsiness. If it is a case of diarrhea, some of the mothers usually maintain constant breastfeeding and others stop solid food. Some mother stated that the baby should be given boiled carrots, vegetables' soup, rice, and warm fluids and stop feeding the baby yogurt. Some mothers implied that the amount of food and drinks consumed by the baby must increase and others said that it is according to the appetite because if the baby takes more than he/she should, he or she can vomit. The treatment for diarrhea includes intestinal antiseptic, Smecta, Antinal, Falgine, antibiotic and oral rehydration solutions. All women agreed upon the benefits of the oral rehydration solution; which compensates a large proportion of the lost fluids and salts.

Early Nutrition and Breastfeeding

New born first oral intake should be the mother's colostrum, water with sugar, herbs, glucose, diluted bovine milk - during the first three days after delivery until the mother's produces enough milk -, and baby syrups; all mothers agreed that the delivery doctor advised them to feed their babies syrup. They agreed that colostrum is scientifically proven to increase the newborn's immunity to external factors and protect the baby from jaundice and that it lasts for the first three days after delivery only. Only one mother stated that she is not aware of the mother's colostrum. In case of a natural birth, the child is placed immediately after delivery on his mother's chest to feel her warmth and tenderness and the child is breastfed immediately. In case of a C-section, the child is placed on his mother's breasts 2 hours after the operation. The newborn is then given first swallow milk until the mother has recovered from the operation and is able to breastfeed. Mothers usually are the ones who clean the baby's umbilical cord and wash their hands beforehand (only one said that she did not wash her hand). Some newborns may weigh less than the average weight – decided by the doctor – and that may be due to the mother's poor nutrition during pregnancy, hereditary conditions, and/or a lack of iron supplements intake during the pregnancy. These babies should be admitted to the neonatal ICU; unfortunately, spots are not always available in general hospitals. There is a neonatal ICU at Kafr Shokr hospital, but spots are very limited there as well. In private hospitals, the neonatal ICU is very expensive and its cost varies between EGP180 to EGP250 per night. The mother's mother, mother-in-law and sister are the ones who take care of the mother and her baby during puerperium period. A large number of mothers clarified that their husbands provide their wives with the needed care during puerperium period.

Mothers stated that exclusive breastfeeding should last from four to six months without any additional supplements and they stop breastfeeding their babies completely after two years; however, mothers introduce new types of food for the baby by the age of 2, 3, or 6 months or after puerperium period. The introduced types of food are yogurt, boiled water of rice, yolk, cheese, and cereal food. From another side, working mothers have no choice but to take their newborns with them to work or leave them at home with someone they can trust; most of them are generally allowed to leave work for an hour and return home to breastfeed their newborn during the day. Most mothers stated that they prepare fresh juices and baby drinks for their newborns before going to work until they are able to return home and breastfeed them. One mother stated that she tried to pump her breast several times in vain. Only two mothers know about the idea of pumping milk and saving in a cool place after sterilizing the container. Mothers feel that their body is not producing enough milk when their baby cries constantly and/or has trouble sleeping. In this case, they know that the step to take is to add formula milk to their breast milk daily intake. Additionally, some mothers received some advice on the right breastfeeding methods for their newborns from other mothers and mothers-in-law, and on breastfeeding the baby every two hours or as prescribed by the physician. There are some breastfeeding problems facing the mothers such as breast milk dryness and having milk available only through one breast. Consequently, mothers receive formula milk from the hospital that usually refuses to provide formula milk for more than 6 months old babies.

Baby's Growth Development

There are several signs of a poor newborn growth, namely; when the baby does not gain weight or loses weight, when the newborn does not eat well, gain weight, and/or grow taller, when the baby does not start teething, crawling or walking. Mothers stated that the main causes of a baby's poor development conditions are the lack of healthy food especially different types of meat, as well as being subjected to worms, and exaggerated playful movements. In these cases, Mothers acknowledged that they should feed their newborns more often and allow them healthier meals. The baby is weighed during each vaccination visit to the hospital or each 15 to 20 days and/or when the baby is sick; but unfortunately, few mothers are actually aware about the Weights and Height Growth Chart.

Nutrition after 6 months

Babies are given yogurt, cereal food, vegetables' soup, mashed potatoes, and yolk after 6 months. Some mothers stated that the newborn eats the same food as the rest of the family, while others clarified that they or their mothers-in-law prepare special food for the baby who usually eats first before the rest of the family. Moreover, they buy together the food, and the mother-in-law decides the type of food to be cooked if they live together in the same house, if not, the mother is the one who decides about the baby's food. Mothers usually stop breastfeeding their babies after one and half year. According to the mothers, healthy meals consist of vegetables such as peas or zucchini, carbohydrates, proteins, salads, chicken, meat or rice. Mothers acknowledge that the body benefits from a healthy meal because it contains different types of nutritional elements. However, financial conditions do impede mothers in choosing the right ingredients and cooking healthy meals. An affordable healthy meal is composed of koshari, salad, onion, or lentils.

Respiratory System Problems

The baby is weighed during each vaccination visit, while the baby's height is not measured unless the mother asks the nurse to. Only one mother is interested in weighing her baby monthly. Mothers stated that the main causes of a baby's stunted growth or thinness are the lack of healthy food and hereditary conditions. No mother knows what to do in case of a baby's stunted growth. Mothers stated that if the baby was born with less than the average weight, they assume that the baby might have worms and thus they run some tests for the baby before taking the newborn to the practitioner for diagnosis. Two mothers are aware of the Weight and Height Growth Chart. There are several signs of a poor newborn development as known by the mothers, namely: yellow face and white lips. The flu, common cold and indirect smoking are considered by the mothers as the main reasons behind newborns' cough. Mothers give their newborns medication and suppositories to treat cough. Pneumonia symptoms in newborns are known by the mothers as namely; poor newborn development, difficulties in breathing, and food rejection. All mothers confessed that their husbands smoke cigarettes near their newborn and the risk of indirect smoking persists even if their husbands smoke in another room or outside the house. Smokers usually spread contaminants in their surroundings through hair, skin, clothes and breath. None of the mothers mentioned that their babies were subjected to pneumonia before.

Family Planning

Family planning guidance and services are available and provided by the Healthcare units or through health television channels such as "My health" channel. Almost all mothers were subjected to family planning guidance and services, provided by the healthcare unit but believe that more awareness regarding family planning issues and services is required. Also, the average number of children per family ranges from 3 to 5 children in both villages. Mothers assume that the benefits of family planning are numerous, namely; improved health, better newborn development, better social and financial status, and families are better prepared to take care of their children. Mothers and their practitioners discuss and decide the most suitable family planning method. Mothers were not aware of contraceptive implants inserted under the skin as well as the injections and their negative impacts. The most prevailed contraception method among mothers is the IUD. Breastfeeding has no relation with family planning. The participants are also aware that frequent pregnancies with very close time spacing might lead to health problems for the mothers, anemia for instance. Family planning disadvantages from the mothers' perspective are that contraceptive injections form an increase amount of water under the skin, whereas birth control pills increase the blood pressure, and IUDs cause vaginal bleeding. Mothers stated that they discuss and convince their husbands with the contraception method to be used. Mothers do change the contraception method if they feel uncomfortable with the one they are presently using.

4.1.2 Mothers-in-Law

Healthcare Services

The participants of El Abbasa Al Kobra village were from the age bracket of 45 to 75 years old and do all live in the village. In addition, a total of six mothers-in-law attended the focus group discussion conducted at Shobra El Nakhla village. Mothers-in-law agreed that the Health Care service provider is chosen based on the mother's comfort towards a specific service provider and/or a physician's reputation. Their daughters-in-law usually visit a general practitioner at private clinics but receive vaccines and Tetanus shots from the general hospital. Private clinics' practitioners are deemed to be adequate and provide good medical services. Their daughters-in-law try to visit private clinics every month or two during their pregnancy when appointments are available. The check-up fee at private clinics varies between EGP25 and EGP30, while consultation fee costs EGP10. The general hospitals and the health unit do not provide suitable medical care. Mothers-in-law stated that the general physician at the Health Care unit does not conduct antenatal care visits.

Mothers and Natal Health during Pregnancy

During pregnancy, mothers-in-law accompany their daughters-in-law to antenatal care visits every month or two. In addition, mothers-in-law clarified that daughters-in-law follow up their pregnancy regardless of the gender of the fetus. During pregnancy, mothers-in-law stated that mothers usually conduct antenatal care visits if they suffer from abdominal cramps, backache and in case of vaginal bleeding. Mothers-in-law usually advise their daughters-in-law to rest and lay down on their back when the condition is not serious; however, in case of a serious health condition, daughters-in-law should be taken to the healthcare provider. Mothers-in-law and husbands usually remind mothers of their antenatal care appointments. According to mothers-in-law, dangerous signs during pregnancy can be illustrated in vaginal bleeding, sudden gush of water, miscarriage, sudden dryness of water around the fetus and abdominal cramps. If any of these symptoms occur, they will definitely accompany their daughters-in-law to their healthcare provider.

Delivery Operations

Mothers-in-law agreed that the delivery usually takes place at a private hospital, a private clinic, or at home through a certified nurse and if the nurse faces complications during the delivery, she would immediately contact the hospital. The practitioner who follows up the mother's pregnancy is the one who usually decides the place of birth. Transportations are not prearranged and if the mother feels contractions, the family would take any transportation available to the practitioner. None of the mothers-in-law did deliver her baby prematurely.

Mother's Health after Delivery

During puerperium, some mothers-in-law stated that the healthcare unit follows up with the mothers and provides them with a capsule. The practitioner - who conducted the delivery operation - is the one who usually follows up with the mother in case of a C-section; either by visiting her or by having the mother visits the hospital. Some of the mothers-in-law said that the follow-up visits should be after seven days from the delivery and some of them said that it depends on the health condition of the mother. Mothers-in-law do provide mothers with advice regarding eating healthy food, drinking fluids, and taking a pill to maintain constant exclusive breastfeeding. Mothers-in-law clarified that the mother eats duck and chicken for a week after delivery and then she can start eating any other type of food. In addition, a mother-in-law stated that she gives her daughter-in-law a quarter cup of castor oil three times a day after delivery to prevent fever and clean her stomach. While other mothers-in-law stated that their daughters-in-law drinks herbs, tea and eat chicken. According to the mothers-in-law, the main health issues experienced by their daughters-in-law within the first two weeks after delivery were, mainly; fever, puerperal fever colic, and opening of the C-section stitches. If any of these symptoms occur, they would have to immediately contact the healthcare provider instead of resorting to traditional prescriptions.

The Newborns' Health

Mothers-in-law stated that if the newborn is ill, they advise the mothers to visit a practitioner. Mothers-in-law stated that the main health issues experienced by their newborns within the first two weeks after delivery are, namely: jaundice, colic, fever, vomiting, irregular sleeping, constant crying, infection of the umbilical cord and diarrhea. In case of jaundice, baby should be admitted at a neonatal intensive care unit and in case of colic, newborn is given caraway and cumin drinks. They ensured that would take the newborn to the nearest healthcare provider in case any of these symptoms occurred severely.

Diarrhea

According to the participants, the newborn who suffers from diarrhea should be immediately taken to the practitioner. The main causes of diarrhea for the newborns are, namely: if the baby was subjected to a contaminated surface, common cold, colic, and hot milk. Diarrhea has the following symptoms: drowsiness, jaundice, loss of skin elasticity and weight loss. If that is the case, mothers usually stop breastfeeding their babies whether exclusively or by formula, and give the baby Entocid medicine to prevent dryness or any other medicine prescribed by the pharmacist. However, if the baby does not heal, a physician should be sought. Only one mother-in-law stated that mothers should maintain constant breastfeeding in case of diarrhea. In addition, mothers-in-law said that in case of severe dryness, they prevent the baby from drinking water and give him/her an oral rehydration solution. Regarding the type of food to be taken during diarrhea, newborns are usually fed starch with cold water, vegetables' soup boiled rice, liquids such as caraway, anise, and mint. In order to avoid Diarrhea for newborns, mother should pay more attention to her breast's hygiene, and feed the baby well.

Early Nutrition and Breastfeeding

Some mothers-in-law said that the newborn first oral intake should be the mother's colostrum since it is beneficial for the baby in terms of increasing the newborn's immunity to external factors. The colostrum is of a yellow color and lasts for the first three days after delivery only, while some mothers-in-law stated that it is actually produced three days after delivery. In case of a C-section, the newborn is given glucose until the mother has recovered from the operation. The child should be placed immediately after delivery on his mother's chest to feel her warmth and tenderness. According to mothers-in-law, exclusive breastfeeding should last for six months without any additional supplements; and only one mother-in-law mentioned that she has breastfed her baby for two complete years without any additional supplements. Some mothers-in-law stated that by the age of four months, the baby is fed yogurt and biscuits with sweetened water, while others stated that babies less than six months should not be given any types of food or drinks outside the milk to avoid the formation of rot inside the baby's stomach. One mother-in-law said that she gave her newborn a date to taste it as a Sunnah of Prophet Mohamed as well as a cucumber to smell it. When the mother is out for work, mothers-in-law give the newborn water with sugar, biscuits, or let any neighbor who has a baby breastfeed him/her. The idea of pumping milk from the mother's breast is not common among mothers-in-law, whereas they believe that mothers pump their breast when they feel they are swollen. The pumped milk is not given to the baby; it is thrown away.

Nutrition after 6 months

Mothers-in-law do help their daughters-in-law feed their babies and take care of the children in their absence. By the age of 6 months, mothers start weaning their newborn and babies should start eating yogurt, biscuits, potatoes, cereal food, vegetables' soup and boiled-fried eggs. Most of the mothers-in-law implied that the baby should start eating grown-up food when he/she is eight month old and some said the baby should eat solid food when he/she turns one year. Babies usually eat three times a day besides breastfeeding. Mothers usually stop breastfeeding their babies from one year and half to two years. According to the mothers-in-law, daughters-in-law usually take their mothers-in-law opinion regarding the type of food to be cooked for the family, while daughters-in-law determine the quantity of food to be cooked. Mothers-in-law stated that their daughters-in-law are the ones responsible for buying food and the household demands. Healthy meals should contain chicken, meat, rice, and salad. Severe financial conditions lead the family to cook affordable healthy meals that include potato, eggplant, salad, beans and falafel.

Baby's Growth Development

There are several signs of a poor newborn growth, namely; when the baby has anemia, loses weight, is tired, is drowsy, and does not eat well. Mothers-in-law did not know the reasons for stunted growth and thinness and referred to God's will. In case of a poor newborn growth, the baby is followed up by a physician who prescribes vitamins, food supplements, or calcium injections. Additionally, the baby's weight and height should be measured monthly and/or during each vaccination visit.

Respiratory System Problems

The flu and common cold are considered by the mothers-in-law as the main reasons behind newborns' cough. In these cases, mothers dress up their children with heavy clothing. According to the mothers-in-law, the family buys medication for cough from the pharmacy and if the infant is not healed, then a physician is to be sought. Pneumonia's symptoms as stated by the mothers-in-law are shortness of breath, common cold, fever, and chest allergy.

Family Planning

All mothers-in-law agreed that the majority of their daughters-in-law follow family planning guidance and use contraceptive methods. Some mothers approve of this structure of family planning because it gives the mothers time and space between pregnancies; which has numerous benefits such as improved health, better financial status and families are better prepared to take care of their children. Not all the mothers-in-law agree about family planning as they want more grandchildren; however, husbands and wives are the only ones to decide whether they use contraception method or not. As for the children, they take their vaccinations on time and the mothers remember all the vaccinations appointments according to their vaccination cards. The mothers-in-law assumed that they are well aware of family planning and contraceptive methods because they did not ask any questions regarding family planning. They noticed that among the various methods of contraception are contraceptive injections, birth control pills, IUDs and subdural capsules. The appropriate mean to be used by the mother is determined by her practitioner and her husband and replaced in case of the mother's discomfort or vaginal bleeding.

4.1.3 Fathers

A focus group discussion was held with the fathers at the Community Development Association in Belbees district from the village of Shobra El Nakhla and another one was held at the Center Point of Abu Hamad at the village of El Abbasa Al Kobra in Sharqya Governorate. Approximately 10 fathers have attended this discussion from the village of Shobra El Nakhla.

Health Services

When asked about the available healthcare providers, the fathers stated that these are, namely; the general hospital of Belbees (located 9 – 10 km away from the village and requires transportation), the Health Care unit, and private clinics. Fathers stated that their wives antenatal care services at private clinics, the general hospital, or the Health Care unit, while delivery operations usually take place at Belbees general hospital, a private clinic for those who can afford it, or at home; and this is decided according to the physician diagnosis and the type of delivery operation. Regarding the Health Care unit, it provides antenatal care and vaccine and Tetanus injections but is not equipped with medical facilities that allow conducting delivery operations. Also, delivery operations are always with the same doctor that provides antenatal care services. If the practitioners at the unit are faced with a difficult diagnosis, they refer the mother to Belbees general hospital or the general hospital at El Zaqaziq. In addition, the private clinics are deemed to have better healthcare services, good practitioners and conducts all sorts of delivery operations. The issue is that private clinics are expensive and far away from the village but the mothers can take available transportation to reach them. Some of the fathers stated that the working hours of the clinics are appropriate and some of them implied that they are not suitable because the patient waits a long time before a consult. They have no alternatives regarding the expensive prices of private clinics and as for the expenditures, fathers give the priority to their families even if they are obliged to borrow

to be efficiently treated. Some fathers stated that mothers are the priority over the children and others stated that they are no priorities amongst family members. The check-up fee at the private clinic is EGP25.

Mothers and Fetal Health during pregnancy

During the 9 months of pregnancy, the fathers in the villages of El Abbasa Al Kobra and Shobra EL Nakhla agreed that a normal schedule for their wives antenatal care visits to the practitioner would potentially be twice per month. The first visit is for examination and the second for follow-up. The schedule may vary according to the mother's medical condition. Families' severe financial conditions are often the main reason for not conducting antenatal care visits periodically. Moreover, fathers confirmed that husbands should encourage their wives in going to antenatal care visits periodically in order to check the fetus's health condition. Fathers stated that their wives can visit the general practitioner with their husbands, go with their husbands, their mothers and/or sisters. When the husbands accompany their wives, they usually remain in the waiting room unless sonar is to be done. Fathers stated that they are the ones who choose the place of birth for their newborns, while others stated that the decision is taken in agreement with their wives. The place of birth also depends on the reputation of the physician. According to the fathers, mothers should be encouraged to rest during pregnancy and one of them stated that he helped his three wives during their respective pregnancies. The majority of fathers do not advise their wives with certain food; only one of them did. According to the fathers, dangerous signs during pregnancy can be illustrated in vaginal bleeding, sudden gush of water, swollen body, low blood pressure, tiredness and intense colic. If the wife has any of these symptoms, the husband would immediately accompany her to her healthcare provider, as she should not get any medication unless prescribed by the physician or pharmacist.

Delivery operations

At El Abbasa Al Kobra village, husbands and wives usually choose together the place of delivery of their newborn according to the working place of the general practitioner. While at Shobra EL Nakhla, the practitioner is the one who decides the place of birth for the newborn. In general, the family's financial situation is also important to identify the place of birth. From another hand, the choice of the general practitioner depends on the efficiency of his medical services and the place of delivery is determined a week prior delivery in case of a C-section and easy transportation should be prepared. In case of a natural birth, mothers usually deliver at the general hospital. Three fathers stated that their wives gave birth at home with the help of a certified nurse. If the nurse faces any complications during the delivery, she would contact the hospital immediately.

Mother's Health after delivery

According to the fathers, the Health Care unit of El Abbasa Al Kobra village does not follow up with the mothers during puerperium. If the mother is tired or feels sick, she will have to go to the hospital for a check-up. Fathers believe that a nurse must visit the mother at home on average one to two times during puerperium, provide the necessary care, and run tests to ensure that the mother and her newborn's health are on track. According to the fathers at Shobra EL Nakhla village, the practitioner who conducted the delivery operation is usually the one who follows up with the mother during the puerperium. If the mother has a stable health condition, she does not conduct follow-up visits; but if she suffers from a health issue, a physician from the hospital should visit her to follow up her condition. There are no follow-up visits from the Health Care unit. During puerperium, fathers must advise their wives to eat nutritious food that are rich in calcium and follow carefully the practitioner's instructions. Fathers usually help providing care to the newborn; where they help in the household chores and carrying the baby. Old women from the village and the mother-in-law usually advise the mother regarding the best methods to taking care of the baby. In addition, fathers encourage their wives to exclusively breastfeed their newborns from day one. Vaginal bleeding, puerperal fever and the open of incision of a C-section are the main health issues experienced by mothers during the first two weeks after delivery. If any of these symptoms occur, mothers should be taken immediately to the healthcare provider and does not contact a midwife as she might have little experience in such cases.

The Newborn's health

According to the fathers, mothers are the primary caregivers of their newborns and they are the ones who usually notice the newborn's illness, since fathers are outside the house most of the time. The mothers are usually helped by family members. According to the fathers, the main health issues experienced by their newborns are, namely: jaundice, common cold, intestinal catarrh and weight loss.

Moreover, vomiting, fever, constantly crying, less sleeping hours and refusing breast milk are symptoms that require the newborn to be taken to the healthcare provider for diagnosis. Fathers confirmed that they do not ask for their parents' experience in case the newborn suffers from a health issue, as they prefer to get a practitioner's diagnosis. In case of these symptoms, both the father and mother accompany their newborn to the healthcare provider.

Diarrhea

In case of diarrhea, fathers stated that they take their babies to the physician or pharmacist, or give them diarrhea suppositories. If the newborn has continuous diarrhea reaching three times a day, the mother usually decides whether to take the baby to the physician or not for diagnosis. Diarrhea has usually the following symptoms: refusing breast milk, weight loss, yellow lips, jaundice, yellow face, constant crying, tired eyes, high fever and fatigue. According to the participants, the main reasons for diarrhea affecting newborns are common cold, changing weather, food contamination, breastfeeding and hot mother's milk. If the baby suffers from diarrhea, mothers should sterilize the baby's food, clothes, and their breasts. Two fathers suggested that mothers maintain exclusive breastfeeding in case of diarrhea while the majority of fathers guessed that exclusive breastfeeding increases diarrhea. In addition, fathers stated that newborns should be given more liquids besides medicine. The oral rehydration solution is given to the baby who suffers from dryness and not for treating diarrhea.

Early Nutrition and Breastfeeding

If the baby was born before the completion of the nine months of pregnancy and/or the newborn weigh less than the average weight, they should be admitted to the neonatal intensive care unit at Belbees general hospital, costing EGP250 per day. If there no spots are available at the general hospital, the family would admit the newborn to the hospital at El Zaqqi or Ismailia or resort to a private clinic. If the family cannot afford to admit the baby to the neonatal ICU, they would borrow money for the sake of the child's special care. According to the fathers, exclusive breastfeeding lasts from six to 24 months. By the age of four months, mothers introduce new types of food and drinks for the baby such as yogurt, cereal food, potatoes, rice pudding, milk pudding, biscuits with tea, and orange juice according to the baby's willingness to eat. Mothers also introduce new types of food and formula milk if she does not produce enough milk. Working mothers are generally allowed to breastfeed their newborn for one hour during working hours, and/or they breastfeed their babies before work and after returning home. While mothers are out of the house, mothers-in-law take care of their grandchildren and give them liquids such as caraway and boiled rice water. The idea of pumping milk is not common among the fathers and they state that mothers know the best about this issue.

Nutrition after 6 months

Mothers are usually the ones responsible for child care and food. After 6 months, mothers begin to introduce solid foods gradually to their babies. Mothers usually stop breastfeeding their babies at one and half year to two years or before that time if she is pregnant with another child or suffers from poor health condition. Babies start eating food such as mashed biscuits, yogurt, mashed beans and vegetables, and drinking juices. Moreover, the baby is fed at the same time as the rest of the family.

Baby's Growth Development

According to the fathers, there are several signs of a poor newborn growth, namely: extreme weight loss and thinness which is due to malnutrition. To protect the baby from poor development, the newborn must be well fed and fathers must marry tall mothers. Fathers stated that the baby is only weighed during each vaccination visit to the health unit. Fathers blame the mothers if the newborn suffers from any weaknesses. According to the fathers, a healthy meal should contain one of the following rice, vegetables, salad, juices, and a slice of

chicken or meat. While an affordable healthy meal can be composed of eggs, eggplants, yogurt, cereal food, potatoes, beans, falafel, and salad. None of the fathers is aware of the Height and Weight Growth Chart.

Respiratory System Problems

According to the fathers, the main reasons behind newborns' cough are viral pneumonia, common cold, flu, changing weather, indirect smoking and chest congestion. If babies are suffering from cough, they are given the medication prescribed by the physician or pharmacist. Some fathers stated that pneumonia symptoms in newborns are, namely; tough cough with phlegm.

Family planning

All fathers agreed that they received family planning guidance and services through health campaigns and that there are contraception methods available at the Health Care unit. Some of them said that the average number of children is two to three and some said four to five. The reason behind that is polygamy - one father has three wives and five children-. According to the fathers, the advantages of family planning are the provision of a better health status for the mother and the children. Fathers assume that reasonable time spacing between each pregnancy will lead to a better development for the newborn and families are better prepared to take care of their children in terms of growth development and finances. Common contraception methods used are birth control pills, contraceptive injections and IUDs. Using contraception methods might have negative impacts such as sterility or bleeding. In addition, mothers do change the contraception methods if they feel uncomfortable with the one they are using. Moreover, fathers decide applying the approach of family planning or not, while mothers determine the suitable contraception method with her practitioner. According to the fathers' perspective, family planning is religiously allowed, while identifying how many children the family would like to have is religiously forbidden.

Baby's gender

Most of fathers implied that raising children is the responsibility of the mother and they only participate to the financial well-being of the family, when possible. Fathers like to play with their daughters more than their sons. Some fathers stated that girls eat more than boys and others implied that boys should be well fed because they grow up to be men. The rest stated that boys and girls are the same and they should not be treated differently.

4.2 QALYOBIA GOVERNORATE

4.2.1 Mothers

Healthcare Providers

On the 9th of October 2012, a focus group discussion was held at the mosque with approximately 15 mothers from the village of El Monsha'a Al Kobra. The participants belong to the age bracket of 20 to 45 years old and are all inhabitants of the village. There is a known Health Care Unit in El Monsha'a Al Soghra Village and another one in El Monsha'a Al Kobra. The Unit provides antenatal care visit services and X-rays for the village population but is not suitable for C-sections and other complicated delivery operations; which in that case, take place at Kafr Shokr hospital (10-15 minutes away from the Village). There is only one doctor who works at the Unit and no specific medical field is stated. The overall working hours are from 9 AM to 11 am and the check-up costs EGP1. The group of mothers deemed the village health unit as ill-equipped as it does provide basic services such as a weighing scale, and sugar and blood pressure monitors; whereas, the quality of services provided by Kafr Shokr hospital was rated as good enough by almost all mothers.

Another focus group was conducted on the 3rd of October at the Association for Family and Community Development in El Kanater district in El Shorafa Village. This discussion was attended by more than 15 mothers from the village of El Shorafa. The available healthcare providers at the village are the general hospital, the Health Care unit, and private clinics. Mothers usually prefer to visit private clinics because they

have better equipped facilities with up-to-date medical devices; in general, private clinics do provide better healthcare services than public facilities. Private clinics' check-up fees vary between EGP50 and EGP100, while the Healthcare unit fees are more financially affordable by the villagers but provide poor healthcare services. In addition, there is only one general practitioner or one physician who sees all the patients regardless the complaint and no specific medical field is stated. The doctor is also not available every day of the week. Most of the private healthcare providers are far from the village and do require transportation to be reached. Choosing a specific healthcare provider depends on the time and type of one's illness; for instance, if a family member gets sick during the day, the Healthcare unit is the only available choice – since the Healthcare unit is operational only during daytime - but if someone gets sick at night, then the private clinics are the only place to revert to. Mothers stated that they prioritize their health expenses according to the extent of the illness; for instance, they give prioritization for the members of the family who suffer from chronic diseases rather than those who have a common cold.

Mothers and Fetal Health during Pregnancy

During pregnancy, the mothers of the village of El Monsha'a Al Kobra agreed that a usual schedule for their prenatal visits to the practitioner is once to 3 times during the first 5 months of pregnancy, or it can be twice a month in case the follow-up is done with a private clinic. A private appointment fee would average EGP35. Unanimously, the mothers agreed that prenatal check-ups should at least reach 4 visits during the pregnancy period. However, one of the mothers stated that she visited her practitioner only once during the 9 months of pregnancy. Regarding the selected health care facilities for prenatal check-ups in El Shorafa village, half of the mothers mentioned that they follow up prenatal check-ups at the local Healthcare unit, while the other half at private clinics. At the village of El Monsha'a Al Kobra, both husband and wife choose the pregnancy doctor jointly depending on his/her reputation and their financial situation at the time of the pregnancy. In El Shorafa village, while husbands sometimes encourage their wives to follow up their pregnancy - depending on the family financial condition - the majority of the mothers are the ones who actually decide whether to follow up the pregnancy check-ups or not. In addition, husbands are the ones who decide whether their wives' pregnancy check-ups are to be conducted at the Healthcare unit or at private clinics according to the family's financial condition. According to the mothers in both villages, dangerous signs during a pregnancy can be illustrated in stomach pain (colic), vaginal bleeding, severe headaches, weight loss, sudden gush of fluid from the vagina, and a noticeable decline in fetal movement. If any of these symptoms occurred, they would have to immediately contact their healthcare provider. As prescribed by their physician, all mothers were following their iron intake and taking iron pills at the village of El Monsha'a Al Kobra. Six mothers were offered the pills at the Health Care Unit for free. While the others had to buy them from private pharmacies with a unit cost that varies between EGP9 to EGP25 according to the supplement's brand. Mothers were not really aware or informed about the right dosage of iron intakes and side-effects of iron supplements. With regards to iron intake at El Shorafa village, approximately 11 mothers took iron pills as prescribed by the physician during their prenatal period. Iron pills are available at private pharmacies with reasonable prices, but some of the mothers stated that these pills are expensive.

Delivery Operations

Husbands and wives at both villages usually choose together the place of birth they see fit for the birth of the child; El Monsha'a Al Kobra village choose the place from the beginning of the pregnancy period while at El Shorafa village, they choose it approximately 15 days prior to the expected delivery date but mothers-in-law have also a strong say regarding the place of birth. The operation takes place in the general hospital or in a private clinic for those who can afford the expensive cost of the operation and want to avoid the mistreatment and poor healthcare services of

the general hospital. The child birth takes place at the general hospital for the families who have a meager financial situation. According to some mothers at El Monsha'a Al Kobra village, the hospital staff is ill-trained on complex deliveries such as C-sections. This type of delivery is generally expensive; approximately EGP1000 in a public hospital compared to 1500 in any private clinic. In addition, mothers are not required to pay for normal deliveries at the village hospital. None of the gathered mothers at El Monsha'a Al Kobra village gave birth at home; "we do not give birth at home anymore (...) it is not the case anymore". Only one mother at El Shorafa village gave birth at home through a traditional midwife, as she did not have enough time to reach the closest healthcare provider.

Mother's Health after Delivery

The healthcare units at both villages follow up with the mother during the postpartum period and nurses visit the new mother at least twice during the postpartum period to provide care for her and her new born. These visits aim at checking the mother's health condition if the delivery operation was a C-section and offering them birth control pills. However, approximately nine mothers from El Shorafa village stated that the healthcare providers did not follow up with them in the postpartum period. After delivering the baby, mothers agreed that no healthcare provider advised them regarding the right methods of taking care of their newborns. During the postpartum period, husbands usually help their wives and try to provide them with the needed care. Mothers-in-law usually help the mothers take care of the baby. Health problems that might occur for the mothers within the first two weeks after delivery are, namely; vaginal bleeding, breastfeeding problems, and inadequacy of the mother's milk or low milk supply. In case any of these symptoms occurs, the mother should visit her healthcare provider.

The Newborn's Health

All the participants estimated that the main health issues experienced with their newborns after delivery were namely; stomach pain (colic), jaundice, allergy, vomiting, constipation, fever and infection of the umbilical cord (this area should be cleaned 3 times daily). The newborn is usually taken immediately to the hospital by his father, mother or anyone available at home if he/she has any of the above symptoms. Mothers give their newborns mint drink and/or take their babies to the physician if he/she is sick.

Diarrhea

According to the mothers, a newborn can suffer from diarrhea if he is teething or if there is a high degree of pollution in the area, or if the newborn was subjected to any contaminated surfaces. Mothers agreed that they could decide whether their babies have diarrhea or not through the following symptoms, namely; high temperature, yellow face, dehydration, skin allergy, drowsiness and jaundice. The causes of diarrhea for the newborns are, namely; teething, common cold, cold milk and intestinal catarrh. If that is the case, mothers usually maintain constant breastfeeding and give the newborns more liquids and juices; they also tend to avoid yogurt. Mothers believe that breastfeeding is important for the babies who are suffering from diarrhea as it helps the baby regain the lost fluids. Regarding medicine, mothers usually give their babies an oral rehydration solution in case of diarrhea; this usually prevents and treats dehydration and they pay more attention to their babies' hygiene.

Early Nutrition and Breastfeeding

New born first oral intake should be the mother's colostrums, water with sugar, glucose, or herbs. Colostrum is scientifically proven to increase the newborn's immunity to external factors and protects the baby against jaundice. All the mothers were well aware of colostrum and its benefits in terms of increasing the newborn's immunity to external factors, and that it lasts within the first three days after delivery only. In case of a natural birth, the child is placed immediately after delivery on his mother's chest to feel her warmth and tenderness and the child is breastfed immediately. In case of a C-section, the child is placed on his mother's breasts for the first time 2 hours after the operation. The newborn is then given first swallow milk until the mother has recovered from the operation and is able to breastfeed him/her child. Mothers usually are the ones who clean the umbilical cord for the baby and wash their hands beforehand (only one said that she did not wash her hand). Some newborns may weigh less than the average weight – decided by the doctor – and that may be due to a mother's poor nutrition during pregnancy, hereditary conditions, and/or a lack of iron supplements intake during the pregnancy. Babies should be put in incubation, which is unfortunately, not widely available in general hospitals. There is a newborn incubation section at Kafr Shokr hospital, but spots are very limited. In private hospitals, the Newborn incubation cost is very expensive and varies between EGP180 to EGP250 per night.

Mothers stated that natural breastfeeding should last from four to six months without any additional supplements. Additionally, newborns should be given supplements besides breastfeeding if the mother's milk is not enough to feed the baby. From another side, working mothers have no choice but to take their newborns with them to work or leave them at home with someone they can trust. They are generally allowed to leave work for an hour and return home to breastfeed their newborn during the day. Most mothers stated that they prepare fresh juices and baby drinks for their newborns before going to work until they are able to return home and breastfeed them. One mother stated that she tried to pump her breast several times in vain. Some mothers feel that their body is not producing enough milk when their baby cries constantly and/or does not sleep several continuous hours. In this case, they know that the step to take is adding formula milk to their breast milk daily intake. Additionally, some mothers received some advice on the right breastfeeding methods for their newborns by other mothers and mothers-in-law, and on breastfeeding the baby every two hours or as prescribed by the physician. There are some breastfeeding problems facing the mothers such as milk dryness and having milk available only through one breast. Consequently, mothers receive formula milk from the hospital that usually refuses to provide formula milk for 6 months old babies.

Baby's Growth Development

There are several signs of a poor newborn growth, namely; when the baby does not gain weight or loses weight, when the newborn does not eat well, gain weight, and/or grow taller, when he/she does not start teething, crawling then walking. Mothers stated that the main causes of a baby's poor development conditions are the lack of healthy food especially different types of meat, as well as being subjected to worms, and exaggerated playful movements. In these cases, Mothers acknowledged that they should feed their newborns more often and allow them healthier meals. The baby is weighed during each vaccination visit to the hospital or each 15 to 20 days and/or when the baby is sick; but unfortunately few mothers are actually aware about the Height and Weight Chart.

Nutrition after 6 months

Babies are given yogurt, cereal food, vegetables' soup, mashed potatoes, and yolk after 6 months. Mothers usually stop breastfeeding their babies after one and half year. The mothers and mothers-in-law take care of the babies and prepare them special food and dishes. Moreover, they buy together the

food, and the mother-in-law decides the type of food to be cooked if they live together in one house, if not, the mother is the one who decides about the baby's food. According to the mothers, healthy meals consist of vegetables, carbohydrates, proteins, salads, chicken, and rice. Mothers acknowledge that the body benefits from a healthy meal because it contains different types of nutritional elements. However, financial conditions do impede the mothers in choosing the right ingredients and cooking healthy meals.

Respiratory System Problems

The flu, common cold and indirect smoking are considered by the mothers as the main reasons behind newborns' cough and pneumonia. Pneumonia symptoms in newborns are known by the mothers, namely; poor development, difficulties in breathing, and food rejection. All mothers confessed that their husbands smoke cigarettes close to their newborn and the risk of indirect smoking persists even if their husbands smoke in another room or outside the house. Smokers usually spread contaminants in their surroundings through hair, skin, clothes and breath. Mothers give their newborns medication and suppositories to treat cough. None of the mothers mentioned that their babies were subjected to pneumonia before.

Family Planning

Family planning guidance and services are available and provided by the Healthcare unit of the village. Almost all mothers were subjected to family planning guidance and services, provided by the healthcare unit. Mothers believed that more awareness regarding family planning issues and services is required. Also, the average number of children per family ranges from 3 to 5 children in the village of El Monsha'a Al Kobra and between one to three children in El Shorafa village. Mothers assume that the benefits of family planning are numerous, namely; improved health, better development for the newborn, better social and financial status, and families are better prepared to take care of their children. The mother and her doctor discuss and decide the most suitable family planning method. The participants are also aware that frequent pregnancies with very close spacing might lead to health problems for the mother, anemia for instance, and the infant. None has mentioned any disadvantages regarding family planning and mothers do change the contraception method if they feel uncomfortable with the one they are using.

4.2.2 Mothers-in-Law

Approximately six mothers-in-law attended the focus group discussion at El Monsha'a Al Kobra village and 13 mothers attended the focus group discussions at El Shorafa village. The participants of El Monsha'a Al Kobra village were 45-75 years old and live in the village.

Health Services

The Health Care service provider is chosen based on the mother's comfort towards a specific service provider and/or a doctor's reputation. Follow-up visits and delivery operations usually take place in private clinics located in Kafr Shokr. Families opt, more often, for private doctors and clinics due to the low quality of services provided by public hospitals. A private appointment fee costs EGP30.

Mothers and Fetal Health during Pregnancy

During pregnancy, mothers-in-law agreed that a usual schedule for their daughters-in-law prenatal visits to the practitioner is once a month. While others admitted that 3 to 4 visits during all the pregnancy period are more than enough, taking into consideration the mother's medical condition. Mothers-in-law stated that their daughters-in-law are accompanied with either their mothers-in-law,

husbands, or their mothers during prenatal check-ups; but usually the mothers-in-law. In addition, the mothers-in-law encourage their daughters-in-law to follow up their pregnancy regardless the gender of fetus. Mothers-in-law can decide if their daughters-in-law are sick if they have common cold or vomit repeatedly. According to the mothers-in-law, dangerous signs during pregnancy can be illustrated in vaginal bleeding, sudden gush of fluid from the vagina, high blood pressure, amniotic membrane rupture, and if the uterus is tight. If any of these symptoms occurs, they will definitely accompany their daughters-in-law to their healthcare provider. Two of the mothers-in-law stated that their daughters-in-law gave birth before their due date.

Delivery operations

The delivery operation usually takes place at the private clinics, general hospital or at home; however, the majority clarified that delivery operation takes place at the private clinics and rare delivery cases at home. In case of emergencies, the doctor might decide that the operation should take place in the hospital as it is better equipped. The place of birth is decided according to family's financial circumstances. Transportation can be reached easily in case of any sudden delivery cases. All the mothers-in-law stated that they did not have babies that were born before their birth dates. The quality of services provided by Kafr Shokr hospital was rated as good enough by almost all the mothers-in-law. There is a newborn incubation section at Kafr Shokr hospital, but available places are very limited. In this case, the newborn is taken to El Amir or El Tefl hospital. In these hospitals, the Newborn incubation cost is EGP70 per night.

Mother's Health after Delivery

The healthcare unit follows up with the mother during the postpartum period. According to the mothers-in-law, the doctor who conducted the delivery operation is usually the one who follows up with the daughters-in-law during the postpartum period. Nurses, who can visit the mother home to provide care for her and her new born, are available once during the postpartum period. During these visits, nurses run some tests to ensure that the health of the mother and her newborn are on track. They also provide mothers with advice regarding eating healthy food, drinking liquids, and maintaining constant breastfeeding. Sometimes mother-in-law and husband take the daughter-in-law twice to a private clinic to check-up her health. The mothers-in-law are usually helping their daughters-in-law cleaning up the house and cooking food. According to the mothers-in-law, the main health issues experienced by their daughters-in-law after delivery was, namely; vaginal bleeding, puerperal fever, stomach pain (colic), and high temperature. If any of these symptoms occur, then they would have to immediately contact the healthcare provider instead of resorting to traditional prescriptions.

The Newborn's Health

Mothers-in-law stated that the main health issues experienced with their newborns are, namely: jaundice, fever, infection of the umbilical cord and diarrhea. They ensured that would take their newborn to the nearest healthcare provider in case any of these symptoms occurred.

Diarrhea

According to the participants, the main reasons for diarrhea affecting newborns are pollution, changing type of food, or if he/she is teething, and artificial flavored and colored food such as potato chips, chewing gums and lollipops. Diarrhea has the following symptoms: drowsiness, jaundice, loss

of skin elasticity and weight loss. If that is the case, mothers usually maintain constant breastfeeding, pay more attention to the baby's hygiene, and give the newborn more liquids such as hot drinks and juice. According to mothers-in-law, newborns with diarrhea are given more often liquids to treat diarrhea and regain the lost fluids. Participants usually give their babies oral rehydration solutions; which help treating and preventing dehydration and are available at the Health Care unit and private pharmacies. Regarding the type of food to be taken during diarrhea, newborns are usually given starch with cold water, and boiled rice. If the newborn has continuous diarrhea that reaches three or four times a day, drowsiness, stomach pain, and severe loss of skin elasticity, then he definitely has severe diarrhea condition that requires contacting the healthcare provider.

Early Nutrition and Breastfeeding

The newborn first oral intake is the mother's colostrums to be taken immediately in case of natural birth. In case of a C-section, the newborn is given glucose orally or hot drink until the mother has recovered from the operation. The child should be placed immediately after delivery on his mother's chest to feel her warmth and tenderness. The mother and mother-in-law are usually encouraging the daughter-in-law to maintain natural breastfeeding. Almost all mothers-in-law are well aware of colostrums and its benefits in terms of cleaning the stomach and being nutritious and healthy for newborns. Mothers-in-law stated that exclusive breastfeeding should last from four to six months without additional supplements and only one mother-in-law said that breastfeeding should last for only three months in case of the mother's poor health condition. When the mother is out for work, mothers-in-law take care of baby and gives him/her artificial milk and have no choice but to prepare light snacks and yogurt for their newborns before going to work until they are able to breastfeed them. The idea of pumping milk from the mother's breast is not common among the mothers-in-law.

Nutrition after 6 months

By the age of 6 months, mothers start weaning their newborn. Mothers-in-law are supporting their daughters-in-law in preparing food for babies such as vegetables' soup, rice, yogurt, eggs, and cereal food. Mothers usually stop breastfeeding their babies from one year and half to two years and then, babies start eating the same food of the rest of the family. If the baby is less than this age, mother then prepares a special food for her baby. Babies usually eat three times a day besides breastfeeding. Mothers-in-law stated that they are responsible for buying food after agreeing with their daughter-in-law about the type of food. Mothers usually are the ones who decide the meal of day. It seemed that the mothers-in-law at El Monsha'a Al Kobra village are not aware of the meaning of a healthy meal in terms of including multiple nutritious elements; instead, they only mentioned that salad should be included in their meals. According to mothers-in-law at El Shorafa village, an affordable healthy daily meal should include vegetables; zucchini, peas, cucumbers and watercress. Mothers-in-law are responsible for preparing the food in the absence of their daughters' in law.

Baby's Growth Development

According to the mothers-in-law, there are several signs of a poor newborn growth, namely: weight loss, tiredness, drowsiness or does not want to eat. In these cases, mothers-in-law acknowledge that they should feed the newborns more often and offer them healthier meals containing calcium such as eggs, milk, meat, chicken, and fruits. In severe cases, the baby's doctor is contacted.

Respiratory System Problems

The flu, common cold, allergy, change in the climate and indirect smoking are considered by the mothers-in-law as the main reasons behind newborns cough. In these cases, mothers give their babies medication, injections, and hot liquids such as anise and mint. All mothers-in-law confessed that their sons smoke cigarettes close to their newborns and that they refuse to quit smoking. According to the mothers-in-law, the symptoms of pneumonia are breathing difficulties, chest congestion, and high temperature.

Family Planning

The average number of children per family ranges from 1 to 2 children. The participants believed that leaving enough time between pregnancies has numerous benefits such as improved health, better financial status and families are better prepared to take care of their children. Mothers-in-law also estimated that some families do not opt for family planning methods due to religious reasons and lack of awareness. Among the various means of family planning, mothers-in-law revealed that the ones mostly used by their daughters-in-law are contraceptive injections, birth control pills, loops and Subdermal Capsules. The appropriate mean to be used by the mother is determined by her doctor and replaced in case of the mother's discomfort or vaginal bleeding. All mothers-in-law reject contraceptive injections because it causes pain for mothers. Mother is the only one who remembers the days of her newborn's vaccine injections. Mothers-in-law believe that they have enough information regarding family planning guidance and service. All the participants agreed that, nowadays, all the children are treated the same. There are no differences between a girl and a boy.

4.2.3 Fathers

Approximately seven fathers attended the focus group discussion at El Monsha'a Al Kobra village and a total of 10 fathers at Al Shorofa village. The participants are from the age bracket of 30 to 50 years old at El Monsha'a Al Kobra village and do all live in the village.

Health Services

According to the fathers, the health care services in the village are provided through the local Health Care unit and private clinics. Fathers stated that their wives conduct prenatal check-ups at the Health Care unit or private clinics. The Health Care service provider is chosen by the couple based on the mother's comfort towards a specific service provider and/or a doctor's reputation. The Health Care unit lacks equipped facilities and provides poor healthcare service, in contrary to the private clinics that provide better healthcare services. The units working hours are from 9:00 am to 2:00 pm and are considered the closest healthcare provider at both villages and the general hospital operates during the evening. A private appointment fee at El Monsha'a Al Kobra village costs EGP25 and varies between EGP 30 – EGP 150 Al Shorofa village. Fathers confirmed that they prioritize their health expenses according to the extent of the illness; for instance, they give prioritization for the members of the family who suffer from high temperature and Intestinal catarrh even if the condition requires going to the Fever Hospital in Imbaba.

Mothers and Fetal Health during pregnancy

During the 9 months of pregnancy, the fathers of El Monsha'a Al Kobra village agreed that a normal schedule for their wives prenatal visits to the practitioner would potentially be every two weeks or every monthly. The schedule may vary according to the mother's medical condition. On the other hand, according to the fathers of El Shorofa village, mothers do not usually follow up their pregnancy

unless they have unstable health condition. Families' severe financial conditions are often the main reason for not conducting prenatal visits to the practitioner periodically. Fathers stated that their wives are the only ones who decide the suitable healthcare provider for their prenatal visits, while the doctor is the one who determines number of prenatal visits. According to the fathers, dangerous signs during pregnancy can be illustrated in vaginal bleeding, constant vomiting, colics, or any type of pain that needs urgent medical investigation, backache and cramping. Moreover, father takes opinions of old women to decide whether his wife is suffering from a serious health condition or not. If the wife has dangerous signs during her pregnancy, father would immediately accompany her to the healthcare provider. Wife is usually accompanied with her mother, sister, and husband's sister to the healthcare provider in case of normal check-ups and prenatal visits, while husband accompanies his wife in case of serious health conditions. Fathers do help out their wives during pregnancy by cleaning up the house, shopping for groceries and cooking meals.

Delivery operations

At El Monsha'a Al Kobra village, husbands and wives usually choose together the place of birth they see fit depending on their financial situation. At El Shorafa village, the doctor who follows up the mother's pregnancy is the one who decides the place of birth whether it will be at private clinic or hospital in case of a C-section operation. Families may resort to traditional midwife to deliver the baby at home if they suffer from a severe financial condition. Transportation is available and easy to be reached in case of a sudden delivery. C-Sections deliveries in private clinics cost approximately EGP1400 while normal deliveries would cost nearly EGP700. Husbands agreed that cases of giving birth at home are becoming rare; some couples do choose to seek a physician to help the mother give birth at home.

Mother's Health after delivery

The Health Care unit of El Monsha'a Al Kobra village follows up with the mother during the puerperium. Nurses visit the mother at home on average one to two visits during the postpartum period. Nurses provide the necessary care and run tests to ensure that she and her newborn's health are on track. During this period, fathers advise their wives to eat nutritious food that are rich in calcium and follow carefully the doctor's instructions. In the case of El Shorafa village, mothers do not usually follow up their health condition after delivery as long as they are in a good health condition. If not, then they would conduct check-up visits at a private clinic in case of a C-section, and at the Health Care unit in case of a natural birth. Sometimes families' harsh financial condition do impedes mothers in visiting the doctor. Fathers stated that wives' mothers and mothers-in-law usually provide the wives with advice during the first pregnancy, while the educated wife asks only for the doctor's advice. The majority of fathers confirmed that husbands should take care of their wives in terms of accompanying them to the healthcare provider, feeding them well, and ensuring that the newborns' health are on track. Vaginal bleeding and high temperature are the main health issues experienced by the mother after delivery. If any of these symptoms occurs, then the wives should be taken immediately to the healthcare provider, unless the mothers and mothers-in-law have another opinion in terms of giving the mother a traditional prescription.

The Newborn's health

According to the fathers, mothers are the primary caregivers regarding their newborns. The mothers are usually helped by family members. Mothers and mothers-in-law are the ones who usually notice

the newborn's illness, while fathers are out of the house most of the time. According to the fathers, the main health issues experienced with their newborns are, namely: jaundice, loss of skin elasticity, chest allergy, and breastfeeding refusal. In case of these symptoms, both of the father and mother accompany their newborn to the healthcare provider unless they have issues with each other. There is neonatal intensive care unit at Kafr Shokr hospital, but available places are very limited. In private hospitals, the newborn incubation cost varies between EGP200 to EGP1000 per night.

Diarrhea

According to the fathers, a newborn can suffer from diarrhea if he/she consumed contaminated food. Fathers are obliged to give their newborns home-made food only. Diarrhea has usually the following symptoms: jaundice, weight loss, yellow face, constantly crying, tired eyes and fatigue. If that is the case, at El Monsha'a Al Kobra village, mothers stop breastfeeding and give their newborns liquid and juices instead. The majority of fathers at El Shorafa village confirmed that mothers maintain constant breastfeeding and give their newborn more liquids that help the baby regain the lost fluids. In addition, babies are given more liquids, mashed potatoes, vegetables' soup, and boiled vegetables. Regarding medicine, mothers usually give their babies an oral rehydration solution in case of Diarrhea; this usually prevents and treats dehydration.

Early Nutrition and Breastfeeding

Newborn's first oral intake should be the mother's colostrum in case of a natural birth, while glucose is given to the newborn in case of a C-section until the mother has recovered from the operation. Only one father said that the newborn is given herbs with honey in case of a C-section. Fathers stated that natural breastfeeding should last to six months without additional supplements; however, if the mothers' milk is not enough, then the baby is given formula milk. Some newborns may weigh less than the average weight. In this case, newborns should be put in incubators, which are, unfortunately, expensive and insufficient in number. If the families are suffering from harsh financial conditions that prevent them from booking an incubation for their baby, they would borrow from whoever they know; otherwise, they would leave their baby to face his/her destiny. Working mothers usually breastfeed their babies before going to work and after coming back. Working mothers have usually no choice but to leave their newborns at home with someone they can trust usually the grandmother. Some of the mothers are allowed to leave work for an hour and return home to breastfeed their newborn during the day. While others prepare fresh juices and baby drinks for their newborns before going to work until they are able to return home and breastfeed them. The idea of pumping milk from the mother's breast is not common among the mothers-in-law.

Nutrition after 6 months

At 6 months, fathers and mothers begin to introduce solid foods gradually to their babies. Mothers usually stop breastfeeding their babies from one and half year to two years unless she is pregnant with another child or has poor health condition. Babies then start eating food such as chicken, yogurt and drinking milk. Fathers stated that the mother is the only one that determines the type of food for her baby. Moreover, the baby can eat the same food as the rest of the family. According to the fathers, an affordable healthy daily meal can be composed of chicken, meat, fish, eggs rice or vegetables. Unfortunately, not every father is capable to afford the price of healthy food.

Baby's Growth Development

According to the fathers, there are several signs of a poor newborn growth, namely: weight loss, tiredness, mother's poor nutrition during pregnancy, mother's illness, anemia and frequent pregnancies with close time intervals. Fathers stated that the main causes of a baby's poor development condition are, namely: lack of healthy food, mother's poor health condition, taking medicines during pregnancy, and lack of water around fetus. In order to protect the baby from shortness and thinness, the mother should take care of her health and eat healthy food as well as try to avoid stressful situations. The baby is weighed during each vaccination visit to the hospital or if he/she is sick. Fathers are only accompanying their wives to the private clinics that operate in the evening. None of the fathers is aware of the Height and Weight Growth Chart.

Respiratory System Problems

Common cold, flu, the change in the weather and indirect smoking are considered by the fathers as the main reasons behind newborns cough. Pneumonia symptoms in newborns are, known by the fathers, namely: tough cough with phlegm. Father at El Monsha'a Al Kobra village confessed that they smoke cigarettes close to their newborn. They see that the best protection for their newborns is for the fathers to quit smoking for good or to smoke far away from their babies. Fathers at El Shorafa village clarified that they do not smoke cigarette in front of their babies except if they are living in narrow house.

Family planning

Almost all fathers considered that family planning is primordial nowadays due to financial difficulties and high costs of living. According to the fathers, there are no family planning guidance and services' campaigns. Media and the doctors during check-up visits usually provide the fathers with the needed information about family planning guidance and services. Husbands and wives discuss and choose together a method of family planning, but the final decision goes back to the doctor. Common family planning methods used by their wives are birth control pills, contraceptive injections and loops. Some families do not use family planning methods due to many reasons, namely; lack of awareness, lack of access to appropriate contraceptives and the occurrence of pregnancy while using contraceptives. Some fathers may reject family planning because they want to have many children or because of religious issues. The participants are also aware that frequent pregnancies with very close time spacing might lead to health problems for the mother. The average number of children per family at El Shorafa village ranges between two to three children. Only one father confessed that he has a second wife. Moreover, the main advantages of family planning are mothers' better health condition, better social and financial status, and families are better prepared to take care and spend more time with their children. Family planning disadvantage as known by fathers is that the use of the loop for three to four consecutive years might lead to complications for the mother.

Baby's gender

Fathers should take care of their children physically and financially. Fathers believe that they treat all their children – boys and girls – fairly but sometimes discrimination might occur between sons and daughters while related to inheritance; however, they are provided with the same care from their parents.

UPPER EGYPT

4.3 BENI-SUEF

4.3.1 Mothers

Healthcare Services

On the 30th of September 2012, a focus group discussion was conducted at the Association of Ayadi El Kheir at the village of Bani Soliman and was attended by approximately 10 mothers. Another focus group discussion was held at the Association of the Egyptian Youth for Development Services in the village of Tazmnt El Sharqia in Beni Suef governorate and was attended by 10 mothers as well. When asked about the available healthcare providers at the two villages, the participants responded that these are the local Health Care unit, Beni Suef general hospital, and private clinics. The Health Care unit is located 10 minutes away from the village. The unit provides antenatal care visits, gynecological examination, family planning guidance and services, blood pressure monitors, weighing scale, and Tetanus injections. Nurses at the Health Care unit provide antenatal care services for the mothers. There are plenty of beds, medical instruments and equipments as well as weight measuring devices that unfortunately give inaccurate results. The follow up fee at the Health Care unit is EGP1.5 in general but can vary between EGP 15 and EGP 20 during the day for the village of Bani Soliman. The units of Tazmnt El Sharqia working hours are from 11 AM to 12 PM and the follow up costs EGP 1. The follow up fees at the private clinics in the village vary from EGP20, and EGP35. Mothers stated that the Health Care unit does not provide good healthcare services, lacks some vaccines injections for newborns, a sufficient number of nurses, and a pediatrician as well as complained about the unavailability of doctors during the unit working hours. It was mentioned by few mothers of Tazmnt El Sharqia village that the unit provided invalid injections, while others said that the unit has developed and is now equipped with up-to-date medical devices but they are not actually used. Additionally, there is only an Internal Medicine specialist who conducts all different types of follow ups of multiple specializations and he prescribes only common types of medicine for all patients. There is only one private clinic providing pediatric and internal medicine follow ups as well as delivery operations. Regarding the general hospital, it provides x-rays and delivery operations and is located half an hour away from the village. Choosing one of the above mentioned healthcare providers depends on the health and financial condition of the family member, the doctor's reputation and/or if the mother feels comfortable with a specific doctor. Mothers confirmed that they give a priority for the baby's health condition.

Mothers and Fetal Health during Pregnancy

Mothers follow up their pregnancy at the Health Care unit either every month, every 2 months, before delivery time or when they are to receive the two Tetanus injections. Mothers assume that normal schedule for antenatal care visits should be at least twice per month during pregnancy; however, they stated that most of the time they only follow up their pregnancy if they felt tired. During antenatal care visits, mothers conduct the required antenatal analysis. Husbands usually encourage their wives to follow up their pregnancy only to know the gender of the fetus, while mothers-in-law support mothers to follow up their pregnancy according to the type of their relationship. Families' harsh financial conditions impede mothers from conducting antenatal follow up visits periodically. According to the mothers, dangerous signs during pregnancy can be illustrated in vaginal bleeding,

obvious decline in fetal movement, stomach pain, twitches, severe headache, high blood pressure, a sudden gush of water and pain below stomach. If any of these symptoms occur, they would have immediately to contact their healthcare provider. Regarding iron intake, half of the interviewed mothers of the village of Bani Soliman took iron pills, while the other half did not take iron pills because they conducted blood analysis that showed no reason for them to take the pills. As prescribed by their physician, seven mothers of the village of Tazmnt El Sharqia stated that they took iron pills to treat Anemia, while the others said that they took them as vitamins. Sometimes the Healthcare unit does not offer iron pills; however, they are available at private pharmacies and the general hospital. The iron pillbox contains two bars and costs EGP 15 at the pharmacies in the village of Bani Soliman and with a unit cost that varies between EGP 6 – EGP 12 at Tazmnt El Sharqia.

Delivery Operations

The doctor who follows up with the mother's pregnancy is the one who decides the place of birth depending on the mother's condition and the baby's health; while husbands and wives do choose the place of birth prior to the expected delivery date in case of a natural birth. Six mothers gave birth at the general hospital, and three mothers gave birth at home with the help of a general practitioner; while only one mother gave birth at home with the help of a midwife in Bani Soliman village. While almost all the mothers at Tazmnt El Sharqia village confirmed that C-sections have prevailed amongst them, only two mothers said that they delivered their babies at home. The operation usually takes place at the private clinic, and if the doctor is not available at the time of delivery, then the operation will take place at the general hospital.

Mother's Health after Delivery

Most mothers in Bani Soliman village stated that the Health Care unit does not follow up with the mothers' health after delivery and no caregiver provides them with advice regarding the right methods of taking care of their newborns. Mothers only visit the Health Care unit twice during the puerperium period to register the baby's birth and receive vaccine injections for newborns. Nurses at the Health Care unit of Tazmnt El Sharqia village visit the mother during puerperium to take a blood sample from the baby's leg for birth registration and check the baby's health; but they do not measure the baby's weight, unless the mother takes her baby to the unit and asks for weighting the baby. There is a general practitioner that sometimes visits the new mothers to provide them with the needed information regarding the right methods of taking care of their babies. During puerperium, some of the mothers pointed out that husbands treat their wives unsuitably because the mother usually focuses on taking care of her baby more than her husband's needs; whereas others said that husbands usually help their wives and provide them with the needed care. Health issues that might occur to the mothers within the first two weeks after delivery are, namely: vaginal bleeding, fever, and vomiting. If any of these symptoms occur, the mother should visit her healthcare provider immediately.

The Newborns' Health

All the participants stated that the main health issues experienced by their newborns after delivery were, namely: fever, vomiting, diarrhea, jaundice, chest congestion and chest pain. If the baby has any of the above-mentioned symptoms, the newborn is taken immediately to a private clinic by any person available at home.

Diarrhea

Mothers decide whether their newborns have diarrhea or not through the following symptoms, namely: yellow face and losing weight. If the newborn has continuous diarrhea that reaches 4 times a day, the baby should be taken immediately to a healthcare provider and is given an oral rehydration solution. Only three mothers at Tazmnt El Sharqia village are aware of giving their newborns an oral hydration solution to treat diarrhea and avoid dehydration. Mothers stated that they stop breastfeeding their newborn in case of Diarrhea; unless the baby accepts the breast milk and they stop feeding them formula milk, yogurt, and cereal food. They also give their babies boiled types of food such as carbohydrates and rice as well as more liquids such as mint, anise, and other herbs. The main causes of diarrhea for the newborns are, namely: food and water contamination, or microbes.

Early Nutrition and Breastfeeding

In case of a natural birth, mothers breastfeed their newborns immediately after delivery because they are well aware of the benefits of the colostrum and the limited time period of its production. If the baby rejects breastfeeding, then he/she is given glucose. If the mother is subjected to a C-section, newborns are usually given glucose until the mother recovers from the operation. Moreover, mothers usually are the ones cleaning their baby's umbilical cord by using alcohol and powder until it drops. Some newborns may weigh less than the average weight and in that case, babies should be put at the neonatal intensive care unit at the general hospital. Sometimes families are not allowed to admit their babies at the neonatal intensive care unit (ICU) in the general hospital unless their newborns have been delivered in that hospital. If the family is suffering from a severe financial situation that prevents the baby from being admitted at the neonatal ICU, husbands would then anything to save the baby. Moreover, mothers confirmed that the general practitioner usually provides the new mothers with advice regarding the type of food and drinks to be taken after delivery. The admission at the neonatal ICU costs EGP 17 per day. If no spot is available at the general hospital, families would have to take their babies to a private clinic; which costs approximately EGP 300 per day. Mothers stated that exclusive breastfeeding lasts from two to six months without any additional supplements. By the age of five or six months, mothers introduce new types of food to her baby besides breastfeeding. Working mothers can leave their babies with someone they can trust at home such as their mothers, elder daughters, fathers, husbands or at a nursery. While the mother is out of the house, the baby is given caraway, formula milk, and anise; but the idea of pumping milk is forbidden amongst the mothers because the milk might be subjected to contamination. Moreover, mothers feel that their breast milk is not enough to feed their babies when their newborns cry constantly. The Health Care unit at Bani Soliman sometimes conducts awareness seminars for the new mothers to provide them with advice on the right methods of breastfeeding; however, not all the mothers attend these seminars. During the general practitioner's visit, mothers stated that he/she provides the mother with information such as to breastfeed her baby every two hours, while the Health Care unit of Tazmnt El Sharqia village does not provide the mother with any needed information.

Nutrition after 6 months

Mothers usually stop breastfeeding their newborns by the age of 12 to 24 months and give them yogurt, cereals, biscuits, boiled potatoes or prepare a special meal for the baby. Moreover, mothers discuss with their husbands regarding the type of food to be cooked if they are living in a separated home, while if they are living in a family house, mothers then discuss with their mothers-in-law. Mothers feel that their body is not producing enough milk when their baby cries constantly. According to the mothers, healthy meal should include egg, yogurt, potato, spinach, rice, meat, salad,

soup, and fish. Usually, the wife's sister and mother-in-law take care of the baby when the mother feels exhausted after delivery.

Baby's Growth Development

There are several signs of a poor newborn growth, namely; thinness and exaggerated playful movements; in that case, the mother takes her baby to the general practitioner to measure the baby's weight. Babies are weighed three days after delivery and from four to six times within the next two years. Only one mother knows about the Height and Weight Growth Chart as during each vaccination or follow up visit the height and weight of baby are noted on the vaccination card.

Respiratory system Problems

According to the mothers, the main reasons behind newborns' cough are, namely: dust, smoke, cigarettes, fans, smoke from burning wood, and cold air. If babies are suffering from cough, they are given liquids and medication prescribed by a physician. Pneumonia's symptoms as stated by the mothers are shortness of breath, severe cough, chest congestion, and rejection of breast milk.

Family Planning

The majority of the mothers were subjected to family planning guidance and services. Nurses at the Health Care unit provided mothers with information regarding the different methods of contraception during the puerperium and most mothers are aware of the different contraception methods such as contraceptive injections, birth control pills, IUDs, and sub-dermal capsules. IUDs and injections are the most prevailed methods among the mothers; however, some mothers got pregnant with IUDs. Additionally, the average number of children per family ranges from three to six children. Mothers leave a reasonable period of time that ranges between two to five years between each pregnancy for the purpose of a better health condition and taking care of the children. If the husband refuses contraception, that is because he wants more children or due to religious beliefs. In addition, mothers do change the contraception method if they feel uncomfortable with the one they are using. Husbands discuss with their wives the concept of contraception but do not decide the method of contraception to use.

4.3.2 Mother's-in-law

Healthcare Services

Approximately 10 mothers-in-law have attended the focus group discussion at Bani Soliman village and most of them confirmed that their daughters-in-law conduct antenatal care visits at a private clinic in Beni Suef governorate because they believe that doctors who work at the governorate are more qualified than those of the village. Another 10 mothers-in-law have attended the focus group discussion at Tazmnt El Sharqia village. Mothers-in-law complain that the Health Care unit provides very poor quality services and stated that their daughters-in-law follow up their pregnancy at the private clinic and/or the local Health Care unit. However, they prefer to go to private clinics because they provide better health services than the Health Care unit that provides poor healthcare services and lacks of a female gynecologist. However, some of the mothers clarified that the Health Care unit provides few healthcare services and has medical devices such as sonar, in addition to, internal medicine, optical, and dental specializations in the morning. According to the mothers-in-law, mothers follow up their pregnancy one to two times every month. Sometimes, mother who suffer

from some health issues such as diabetes, follow their pregnancy once per week. The healthcare provider is chosen based on the practitioner's reputation and/or people's opinion. Husbands and wives usually determine together the place they see fitting for antenatal care services. If the husband passed away or is not available, the mother-in-law determines the proper place for antenatal care services with her daughter-in-law.

Mothers and Fetal Health during Pregnancy

The mother-in-law, husband, or sister usually accompanies the mother to the practitioner for antenatal care visits. Mothers-in-law agreed that the normal schedule for their daughters-in-law antenatal care visits is from three to four times during the nine months of pregnancy, or more if the daughter-in-law suffers from health issues such as diabetes or high blood pressure and to receive Tetanus injections. Almost all mothers-in-law admitted that they encourage their daughters-in-law to follow up their pregnancy regardless of the gender of the fetus. According to the mothers-in-law, the dangerous signs during pregnancy can be illustrated in vaginal bleeding, obvious decline of fetal movement, several abdominal cramps, loss of appetite, and vomiting. If any of these symptoms occur, they immediately contact the healthcare provider; which is mostly the general hospital.

Delivery Operations

The delivery operation usually takes place at the general hospital of Beni Suef Governorate at no cost in case of a natural birth or at a hospital determined by the general practitioner while the family has to pay for both of operation and medication in case of a C-section. In case of sudden delivery, if transportation is not available, the mother would have to deliver her baby at home with the help of a general practitioner. The place of birth is determined depending on the families' financial situations. Only one mother-in-law stated that her grandchild was born during the seventh month of pregnancy and was admitted at the neonatal ICU at the general hospital.

Mother's Health after Delivery

During puerperium, nurses from the Health Care unit visit the new mothers to follow up their health conditions; however, they do not provide the mothers with the needed information regarding the right methods of taking care of their newborns. Mothers usually go to the Health Care unit only to register the baby's birth, receive vaccines injections for the newborns, measure the baby's height and weight, and remove the baby's umbilical cord. Mothers-in-law and sisters can go with the baby to the Health Care unit if the mother feels sick. Mothers-in-law, however, stated that if their daughter-in-law delivered her baby naturally and is in a good health condition, she does not need to follow up her health condition after delivery. Health issues that might occur to the mothers within the first two weeks after delivery are, namely: vaginal bleeding, the uterus is not in its right position, and fever. If any of these symptoms occur, the mother should visit her healthcare provider immediately.

The Newborns' Health

All mothers-in-law clarified that the main health issues experienced by their newborns after delivery were, namely: yellow face, fever, diarrhea, rejection of breast milk, vomiting, and jaundice. If the baby has any of these symptoms, he/she should be taken immediately to the healthcare provider. If the umbilical cord has not dropped yet, mothers clean the baby's umbilical cord through using powder and alcohol.

Diarrhea

The main causes of diarrhea for the newborns are, namely: cold in the baby's stomach, intestinal catarrh, microbes, food poisoning, and reduced hygiene for the baby. Diarrhea has the following symptoms, as known by the mothers-in-law: vomiting, yellow face, colics, loss of skin elasticity, and if the baby has stomach worms. If the newborn has continuous diarrhea that reaches 4 times a day, he/she should be taken immediately to a healthcare provider. Almost all mothers-in-law confirmed that daughters-in-law should maintain constant breastfeeding to regain the baby's lost of fluids. Moreover, mothers-in-law pointed out that in case of Diarrhea, babies should be given more liquids besides breastfeeding such as caraway and anise, in addition to boiled food and should stop eating yogurt, eggs, and drinking formula milk. Additionally, an oral rehydration solution should be given to the babies to treat dryness; which can be noticed when the skin loses its elasticity. All mothers-in-law are well aware of the oral rehydration solution and its benefits in case of diarrhea.

Early Nutrition and Breastfeeding

According to the mothers-in-law, by the age of four or five months, mothers start to give their babies new types of food besides exclusive breastfeeding; namely: yogurt, vegetables' soup, a small piece of kidney, beans, and cereal food. Newborn first oral intake should be the mother's colostrum immediately after birth in case of a natural birth because mothers-in-law are well aware of the benefits of colostrum in terms of being full of nutrients. In case of a C-section, the babies are usually given glucose until the mother has recovered from the operation. Mothers-in-law stated that daughters-in-law feel that their body is not producing enough milk when their baby cries constantly. If that is the case, mothers visit the physician to prescribe the baby formula milk. Additionally, mothers-in-law estimated that their daughters-in-law start weaning their newborns from one year and half to two years and if the baby is weak, daughters-in-law should maintain breastfeeding for two complete years. Working mothers have no choice but to leave their babies with someone they can trust such as their mothers-in-law at home. During that time, mothers-in-law give the baby caraway or Anise; but the idea of pumping milk from the mother's breast is not common among the mothers-in-law because they believe that it may be subjected to microbes.

Nutrition after 6 months

Mothers-in-law stated that they discuss with their daughters-in-law the type food to be prepared for the baby. Mothers-in-law advise their daughters-in-law to present new types of food for the baby by the age of six-months besides exclusive breastfeeding. Babies are given egg, yolk, or eat something suitable for the baby's nutrition chosen from the families' everyday meals; otherwise, special food will be prepared for them. Mothers-in-law confirmed that their daughters-in-law are the only ones who are responsible for buying and cooking the baby's food. According to the mothers-in-law, healthy meal should include salad, cooked vegetables such as green beans or beans, rice with meat, spinach, molokhia, and vegetables' soup. An example of an affordable healthy meal can be fried potatoes, cheese, eggplants, and *Keshk* (rice mixed with yogurt and milk) with eggs. The families' financial conditions and the lack of time do impede mothers from cooking healthy meals.

Baby's Growth Development

According to mothers-in-law, there are several signs of a baby's poor growth; namely; no appetite, yellow face, tiredness, a decrease in his/her usual movement, mothers' poor nutrition, and frequent pregnancies. Mothers-in-law stated that they would notice whether the baby is growing well or not after one year. The main reasons behind a baby's poor development might be worms or a disease in

his/her stomach. Almost all mothers-in-law are aware of the Height and Weight Growth Chart. If the baby develops poorly, the practitioner decides the type of food and vitamins to be prescribed for the baby. The baby's height and weight is measured during each vaccination visit. Mothers-in-law believe that the mother's milk is one of the main nutritious elements that lead to the baby's full growth.

Respiratory system

According to the mothers-in-law, the main reasons behind newborns' cough are, namely: cigarettes, cold air and fever. If babies are suffering from cough, they are taken to the healthcare provider in order to provide them with medication as the mother is usually afraid of giving her baby anything that is not prescribed by a physician. Pneumonia's symptoms are: breath shortness, sweating, green face and throat irritation.

Family Planning

Almost all mothers-in-law confirmed that their daughters-in-law are subjected to family planning guidance and services and are well aware of the different methods of contraception such as injections, birth control pills, and IUDs. A specific method of contraception is chosen based on the physician's decision, as well as the husband's agreement. Sometimes husbands do prevent their wives from using contraception methods because they want more children. Additionally, mothers-in-law stated that despite their desire to have many grandchildren; daughters-in-law cannot bear multiple consecutive pregnancies. Mothers are usually the ones who remember the time of vaccination for their newborn, which is usually mentioned in the vaccination card.

4.3.3 Fathers

Healthcare Services

Approximately 10 fathers attended the focus group discussion at Bani Soliman village and eight fathers attended the focus group discussion at Tazmnt El Sharqia village. When asked about the available healthcare services at the village they stated that these are: the local Health Care unit, private clinics, a medical center in town, and the general hospital in Beni Suef. According to the fathers, they prefer to follow up at the private clinic because it provides better healthcare services than the Health Care unit. The unit provides some healthcare services including antenatal care but lacks vaccine injections and sufficient medical devices. The unit used to be equipped with numerous medical devices but they were taken away from the unit because the general practitioner did not revert to these devices for his/her diagnosis. On the other hand, few fathers stated that the Health Care unit has obtained a license to conduct delivery operations and is well-equipped to operate. The Health Care unit working hours are from early morning until midday; however, the practitioner at the Health Care unit is not always available during the unit working hours and treats the patients inadequately. Unfortunately, families' severe financial condition pushes them to conduct check-up visits at the Health Care unit. In addition, fathers complain that when doctors at the unit prescribe a list of medicines for patients, they only give them one kind of medicine for no cost, while patients have to pay for the remaining medicines. In case of any emergency, family members go immediately to the general hospital, which has sufficient vaccine injections; or to any private clinics where the check-up fees vary from EGP50 – EGP 150. Villagers usually choose a private clinic according to its

available medical facilities and the practitioners' reputation. Antenatal care visits fees at the private clinics vary between EGP 30 – EGP 100. Regarding the general hospital, there is only one physician who conducts all types of diagnoses and check-ups. All fathers agreed that the medical center provides good healthcare services.

Mothers and Fetal Health during Pregnancy

According to the fathers, a normal schedule for their wives' antenatal care visits would potentially be once every month or two, or two to three times per month if the mother has poor health conditions. There is no consistent schedule for their antenatal care visits as it depends only on the practitioner's decision. Fathers confirmed that mothers are usually the one who choose the healthcare provider for antenatal care and delivery operation based on the practitioner's reputation. If she used to follow up her previous pregnancy with a certain practitioner, she would visit again the same practitioner; otherwise, she would take her neighbor's opinion regarding the best healthcare provider. Moreover, dangerous signs during pregnancy can be illustrated in vaginal bleeding, blood pressure, diabetes, backache, severe abdominal pain, drowsiness, swollen of feet and albumin. If any of these symptoms occur, any person available at home would immediately accompany the mother to the healthcare provider to check-up her condition, usually the mother's sister, mother, or husband accompanies her. Fathers usually advise their wives to take care of their health during pregnancy, not to carry heavy weights, exert much effort, and get more rest.

Delivery Operations

Fathers stated that the C-section operation prevails by 85 percent among mothers, while natural birth is usually rare and takes place at home with the help of a midwife. In case of any sudden delivery, the mother is carried to the general hospital by car. Fathers clarified that the general practitioner who follows up with the mother's pregnancy, is the one who determines the place of birth in case of a C-section; however, the expected date of the baby's delivery is sometimes not accurate as mothers will go directly to the general hospital when they feel severe abdominal pain and contractions. Fathers stated that the place of birth is usually determined one month before the expected delivery date and is usually the general hospital.

Mother's Health after Delivery

According to the fathers, the practitioner who delivers the baby is the one who usually follows up with the mother after delivery, providing her with medication, and forbidding her to leave the hospital until she has fully recovered. During puerperium, mothers usually go to the healthcare provider; no one visits the mothers at home to provide them with information and advice regarding their health and the right methods of taking care of their newborn. Fathers confirmed that they prepare food and help their wives in case of the absence of wives' mother, sister, and/or mother-in-law and they are also usually the ones who advise the mother regarding the importance of exclusive breastfeeding. According to the fathers, the main health issues that might occur to the mothers within the first two weeks after delivery are, namely: vaginal bleeding, and fever. If that is the case, she should be taken to the healthcare provider. The newborn's first oral intake should be the mother's colostrum to be taken half an hour after delivery. Fathers are well aware about the colostrum, its short period of production (3 days) and its benefits in terms of improving the baby's brains and bones. However, newborns are given glucose until the mother has recovered from the operation in case of a C-section.

The health problems that might occur for the mothers within the first two weeks after delivery are, namely: vaginal bleeding, food rejection, headache, abdominal cramps, and drowsiness.

The Newborns' Health

Fathers clarified that the main health issues experienced with their newborns after delivery were, namely: jaundice, constant crying, fever, breast milk rejection and common cold. If the baby has any of these symptoms, he/she would be taken immediately to the healthcare provider and is not given any traditional herbs or prescriptions.

Diarrhea

The main causes of diarrhea for the newborns as stated by the fathers are; namely, the type of food the baby is consuming, harsh weather, microbes, low hygiene, hot breast milk, and pollution. Diarrhea has the following symptoms: yellow face, vomiting, and tiredness. Some fathers stated that they would take their children immediately to see a practitioner if the diarrhea exceeds twice a day per day, while the others mentioned that they would not take their children to the practitioner if the family already knows the medication to treat diarrhea. The majority of the fathers confirmed that mothers should maintain constant breastfeeding in case of diarrhea as it helps the baby regain the lost fluids. The practitioner is the only one who should provide advice regarding the types of food and liquids that the baby should take in case of diarrhea. Mothers should also take care of their breast's hygiene and sterilize the formula milk or food container. If the baby suffers from dryness because of diarrhea, he/she is given on oral rehydration solution, which is available in private pharmacies, in addition to any medication prescribed by the physician.

Early Nutrition and Breastfeeding

Some newborns may weigh less than the average weight and in that case, babies should be admitted at the neonatal ICU at the general hospital; which costs EGP 21 per day. If there are no spots, families resort to private clinics; which cost approximately EGP150 per day. If the family is suffering from a severe financial condition that impedes admitting the baby into the neonatal ICU at a private clinic, close family, neighbors and friends will support the family financially and/or the father will borrow enough money to cover the financial costs. According to the fathers, exclusive breastfeeding should last from four to six months and the mother should introduce new types of food and liquids to the baby such as yogurt, orange and apple juices, boiled rice, and potato. Fathers pointed out that harsh financial condition are considered one of the main reasons for encouraging exclusive breastfeeding. Mothers start weaning their babies from one year and half to two years because she either goes back to her job, and needs to be in a good health condition or is pregnant with another baby. If the mother is working outside the home, the baby is offered formula milk and cereals. Working mothers have to take their babies with them at work or can leave them with the grandmother or elder sister. The idea of pumping milk is not common among the fathers because the milk can be subjected to contamination.

Nutrition after 6 months

The participants illustrated that the baby is given specific types of food and does not eat the same food as the rest of the family. Fathers admitted that they participate in taking care of their babies but for a short period of time (two to three hours daily), while the mother is the primary caregiver.

Baby's Growth Development

The main reason behind a baby's poor development, as stated by the fathers, is the mother's poor health condition and in this case, the baby is given supplements. Participants agreed that mothers are the ones deciding the type of food to be cooked for the baby; but when the baby gets sick, both the father and the mother discuss the suitable type of food to be consumed by the baby. A healthy meal should contain fruits, carbohydrates, and rice. Breakfast is usually composed of beans, honey, jam, and cheese, while lunch contains a small slice of meat, rice, and vegetables, or fish or chicken. Dinner is usually similar to breakfast. Salad should be included in each meal. The baby's height and weight are measured according to the newborn's health condition. None of the fathers is aware about the Height and Weight Growth Chart.

Respiratory system Problems

According to the fathers, the main reasons behind newborns' cough are, namely: cold air, common cold, cigarettes' smoke, heater, and the changing weather. Fathers admitted that they sometimes smoke cigarettes in the presence of their babies and they acknowledge that they can treat the issue of smoking cigarettes through brushing their teeth, and changing their clothing; which does not actually happen. If newborns suffer from a cough, they are taken to the doctor after trying to treat them with hot drinks, or are given the medication prescribed by the pharmacist. Pneumonia's symptoms are breath shortness and tough cough.

Family Planning

Fathers estimated that the average number of children per family ranges between two to four children. None of the fathers has a second wife. According to the fathers, it is preferable to leave a reasonable period of time between each pregnancy ranging from two to three years. The participants are also aware that frequent pregnancies might lead to severe health problems for the mother and affect negatively the family's financial condition. According to the fathers, a medical campaign was conducted about the different methods of contraception. IUDs and birth control pills are the prevailing contraception methods among the mothers. The main reason for using the methods of contraception is to organize the families' financial situation, while the main reason for not using them is that the father wants to have another baby. There are no disadvantages for using contraceptives from the fathers' perspective. Husbands and wives discuss and choose together the right method of contraception.

Baby's gender

According to the fathers, there is no discrimination regarding the gender of their children.

4.4 ASYUT GOVERNORATE

4.4.1 Mothers

On the 6th of October 2012, a focus group discussion was held at El Fima village with approximately 15 mothers. Later in the same day; another focus group discussion was held in El Shatb village in the same governorate with 25 mothers.

Healthcare Services

The majority of the women seek care in the primary health units although they don't believe the quality of the services provided. The financial factors play major role in their decision. One of the women in El Fima village stated "We don't have option; we have to go to the PHU. We can't afford private clinics unless we are really sick". The PHU are not well equipped and physicians are not always available. Even when doctors available in the unit; they usually provide low quality services. Woman from El Shatb village mentioned "When I went they took my weight and they gave me my injections without taking my blood pressure". The majority of the women confirmed that they go to the PHU mainly for contraceptive or for pregnancy follow up as one of the ladies explained "I go mainly for injections, the PHU doesn't have even tool even to measure the blood pressure". On the other hand many said they prefer private clinic when it comes to children health. The cost of private clinics ranges from 20 pounds inside the village to 70 pounds in the city of Assiut with more specialized doctors. They were also concerned about the cost of medication as one of them mentioned "cost of medication can reach up to 150 and we can't afford that".

Mothers and Fetal Health during Pregnancy

Although the women in the two villages confirmed the importance of prenatal follow up, they mentioned "it depends on the pregnancy as some women don't need strict follow up" other woman said "I go only if there is emergency or complication in my pregnancy". Third lady said "I went to check my pregnancy only twice when I had problems". According the interviewees; the ideal number of prenatal visits is 3 to 4 times considering going on monthly basis in case of complications. Some of the women who can afford going to private clinics go every month and they make sure that physician measure their weight and blood pressure.

The decision of the location and person perform the delivery is determined by many factors include the husband pinion and the quality of the physician. The husband can interfere in the gender of the doctor. In some cases he make the decision completely as one of the women said "The husband can say you are find and don't need consultations". The mother in law can contribute in the decision and can accompany the pregnant lady to the physician.

The interviewees were knowledgeable about the dangerous signs; they mentioned lack of movement of the baby, bleeding, high blood pressure, diabetes. However, some provided other inaccurate signs like low blood pressure and mild fever. The women seek help from university hospitals when they have such dangerous signs even it's far like El Kar El eini hospital in Cairo or Assiut University hospitals. The women didn't have enough knowledge about the Iron tablets and response was controversial. For example one of the women was asking about the color of the Iron tablets. After explanation she said "The doctor used to prescribe vitamins for me but I always skipped the brown tablet". Few women confirmed taking the pills and it was usually for some complications. One of the ladies said "I took it from the fifth month because I had bleeding". Other women considered it important but they let the decision of that to the physician. The financial issue was raised again indirectly for example one of the women said "The PHU doesn't have the iron tablets; it means that I have to go to the pharmacy but if I don't have the money for it I will find a way to buy it". We can conclude that most of the women participated in the FGDs didn't take iron tablets. Few women stopped the tablets because of the side effects associated with it. None of the women was sure about the correct dose of Iron tablets. They also complaint that doctors in both public and private clinics don't explain to their clients the about the dose due to the crowd in their work.

Delivery Operations

Many of the women deliveries conducted in the house by midwives. They talked about the high skills of these midwives but they also mentioned that midwives refer them to the hospitals if there were any complications. Women who follow with private doctor follow his advice about time and location of the pregnancy. One of the respondents mentioned “the doctor chooses the time and location of pregnancy but generally if the pregnancy is weak he does it in the hospital but if it’s dangerous he does it in his clinic”. Financial situation interfered in the decision again as women were talking about different costs for different options. 1000 pounds is the delivery cost in private clinic and only 50 in El Kasr El Eini hospital but this doesn’t include the medication and transportation. There was comparison about the most cost effective choice in each village. Every village came up with their own most cost effective option.

Mother’s Health after Delivery

Mother’s health after delivery is conceived to be less important than antenatal care or delivery itself. The women who delivered at home were less interested with the concept of post natal care. One of the mothers told her story saying “I gave birth alone and the midwife just came to cut the umbilical cord, after that it’s done, I take care of everything”. All the participants agreed on the great value of immediate breastfeeding for the newborn.

The Newborn’s Health

The mothers were concerned about the different aspects of the newborn health. They talked about the importance to clean the umbilical button and take the child to the health facility in case of inflammation. The women raised the issue of jaundice and the importance to watch the color of the skin and eyes of the baby. One of the mothers shared her story “I had baby with jaundice and he died because I couldn’t find incubator for him”. The cost of incubators was discussed thoroughly in the two focus group discussions.

Diarrhea

The causes of diarrhea according to the mothers are the infection due to unclean environment. They also mentioned eruption of the teeth as reason for diarrhea. Some of the mothers reported that Oral Rehydration solutions are not effective to cure their children. They also agreed that it’s better to breastfeed the children during the diarrhea. They considered the continuation of the diarrhea and weakness are good reasons to take the child to health facility and mostly private doctor.

Early Nutrition and Breastfeeding

They mothers valued breastfeeding especially in the first days and majority confirmed that we don’t need to feed the child any extra fluids beside the milk. They tried to feed their babies as soon as they can in the first hours after delivery. The breast feeding continues for six months and food is given as at months with soft food.

Baby’s Growth Development

Many of the women are not familiar with the growth curve but they know that weighting the baby is important when they go to the primary health unit. They believe that the height of the child need to be

watched in addition to the time of walking and teeth eruption but they showed flexibility about ideal time for all of that. They also thought that vitamins prescribed by the doctor would solve the problem.

Nutrition after 6 months

The women know the value of balanced food and can mention food items that are needed for the child like milk and egg, however financial situation controls their ability to provide balanced meals for their children. One of the mothers said “Ideal meal includes milk and egg but we can’t afford that so we do potato, eggplant and salad in the tomatoes and cucumber are cheap”.

Respiratory System Problems

The symptoms of respiratory tract infections include cough, difficulty in breathing and breath sounds. The mothers considered smoking and exposure to cold weather are the main reasons for respiratory tract infections.

Family Planning

The primary health units don’t offer counseling or support to the mothers. Their role is merely to give the mother the contraceptive method. The mothers count on the TV ads or friends to decide about the tool she will ask for in the PHU. Other women explained that they decided to favor one method compared to other one based on merely personal reasons as one of the women explained “I always forget to take the pills so injections are better for me”. Each couple decides on using the contraceptive based on their conditions. Religious and financial factors are the main sources of the decision as having enough money and religious husband go against the using family planning.

4.2.2. Mothers-in-Law

Eight mothers-in-law attended the focus group discussion at the Community Development Association, Al Fayama village; and eight others attended the focus group discussion at the Charity for Community Development Association, Shotb village. The participants from both villages were from the age bracket of 50 to 65 years old and all live in the corresponding villages.

Healthcare Services

Mothers-in-law from Al Fayama stated that the health care unit at their village is not so bad, it has "good" physicians and in fact many young mothers go there for primary care during their pregnancies. Nurses over there weigh the mothers and proceed with the essential lab investigations; but when it comes to delivery, young mothers prefer to go to the hospital and in case the pregnancy has complications, they usually go to Al Kasr Al Eini hospital, a bigger and more equipped hospital. On the other hand, Mothers-in-law from Shotb stated that the service at the health care units in their village is very bad and that they are not equipped at all which explains why almost nobody goes there seeking medical care, the only condition would be for the administration of the tetanus toxoid injection in the last trimester.

Mothers and Natal Health during Pregnancy

Mothers-in-law highlighted that the follow up visits usually take place according to the mother's medical condition, there is no real schedule for the antenatal care visits. That's to say if the mother doesn't feel well or complains from any medical condition during pregnancy, she goes to a private clinic for check up and she follows up with the physician only if the condition is serious and if the physician requests to have another appointment. Mothers-in-law confirmed that their daughters-in-law used to take iron supplements that they bought from the local pharmacies; the health care units in Al Fayama do not provide such needed supplements. Mothers usually take iron after lunch and if they forget, the mothers-in-law remind them of it, they don't exactly understand how it helps but they do know it is important for the growth of the fetus. Mothers-in-law emphasized the role of their sons, and men in general, in the decision making process with regards to the choice of the treating physician. When asked about dangerous signs during pregnancy, they mentioned fever, vomiting, excessive cough, lower limbs swelling that develops before the last trimester, severe common cold or vaginal bleeding. According to mother-in-law from Shotb, some young mothers may go to Assiut Hospital for antenatal care visits; they can be weighed there and receive iron supplements. Others usually go to private clinics where the examination fees range from 50 to 100egp according to the reputation and popularity of the physician. Physicians at private clinics prescribe iron supplements for the mothers, iron is expensive and causes constipation and gastric pain as major side effects, yet the mothers try to buy it as much as they can, according to the financial conditions of the family. Mothers-in law also stated that antenatal care visits average 3 visits during the whole pregnancy unless the mother develops any complications.

Delivery Operations

According to mothers-in-law from Fayama, the delivery operation usually takes place at a hospital, and the treating physician is the one who decides in which hospital the mother shall be admitted (Al Iman or Al Kasr al Eini hospitals). These hospitals are located in Assiut and transportation is easy, pregnant mothers together with their husbands usually take a taxi or a car to go there, which seems to be affordable. Mothers-in-law also mentioned that a traditional midwife is available in the village with her set of "clean" delivery instruments; families can call her at home at any needed time in order to assess the medical conditions of the pregnant mother and advice whether to refer her to a hospital or not. Mothers-in-law reported that they do change on the umbilical cord stump at home with ethanol. They said everything has changed nowadays comparing what is being done currently with newborns with what they used to do in the old days, giving the example of putting eye drops in their eyes instead of "onion jus" as an older practice. Mothers-in-law were so much believing in breast feeding saying it is the most important among all other oral intakes, but it is not always possible beacuse some mothers may not have sufficient amounts of milk in their breasts while others may find it much easier to give their newborns artificial milk. They were also very familiar with the "Colostrum", saying that it's usually given to the newborns unless the mother has delivered by a C-section, in such case, breastfeeding can start up to two days after the operation.

As in Fayama, Mothers-in-law from Shotb reported that the treating physician is the most important person in all decisions regarding delivery; he decides early enough when and where the pregnant lady should deliver and what are the signs of an attempt delivery to be looked for with attention. Criteria for selecting the treating physician are mainly the good reputation and the previous experiences of other ladies in the family. When asked about the dangerous or alarming signs in pregnancy, mothers-in-law from Shotb mentioned threatened abortion, colic, hypertension, hypotension, headache, weakness highlighting the importance of seeking a medical advice at that point. They also mentioned

that most of the ladies nowadays prefer giving birth at a hospital and that C-sections are getting more popular, but the decision is always left to the physician. Mothers-in-law reported that even if the mother has delivered in a hospital, the midwife is the one who comes at home to change on the umbilical cord stump using ethanol and tincture. Concerning breastfeeding, they all agreed on its importance and necessity as the first oral intake, with the exception of a newborn admitted to the NICU for whom glucose is given at first. NICU average 180egp in the private hospital in addition to 300egp insurance.. According to them, colostrums are disinfectant for the gastrointestinal tract of the newborn and it gives him/her a good immunity. Mothers-in-law were so much aware of the importance of the skin to skin contact, for both the mother-baby relationship and the suckling-milk production process

Mother's Health after Delivery

In Al Fayama, if the mother has delivered at a hospital, the treating surgeon follows up with her during her stay at the hospital, but from the time she goes home, it becomes the role of family to take care of her. If the mother goes to the healthcare unit, health professionals over there check on her health status and provide her with some advices regarding eating healthy food, drinking liquids, and maintaining constant breastfeeding. With regards to the alarming signs during the puerperium, mothers-in-law stated that if the mothers experience any fever or rigors, they usually take her to a physician.

In Shotb, no follow up home visits take place, the mother goes to see her doctor after delivery only if she had a C-section and needs to remove the sutures. Fever and puerperal sepsis were the only dangerous signs they mentioned necessitating a consultation.

The Newborn's Health

Mothers-in-law at Al Fayama, stated that the main health issues experienced with their newborns are, namely: jaundice, rash or if the child looks weak and inactive. They ensured that would take their newborn to the nearest healthcare provider in case any of these symptoms occurred. At Shotb, jaundice was the only mentioned dangerous sign a newborn could develop.

Diarrhea

According to the participants from Al Fayama, the main reasons for diarrhea affecting newborns are touching a polluted object and then putting the hand in the mouth or eating an expired food. If the child develops diarrhea, they immediately take him to the hospital where they give him oral rehydration therapy to compensate for the fluid he/she has lost.. Mothers-in-law said that if a child is having diarrhea, he/she is usually unable to suckle, they try to give him/her small amounts of rehydrating fluids every hour, until he/she accepts to be constantly breastfed as before, Mothers-in-law from Shotb highlighted the importance of giving the newborn a great amount of fluids in case of diarrhea to compensate for the loss, in addition to the oral rehydrating solutions and the breast milk that should never be stopped.

Early Nutrition and Breastfeeding

Mothers-in-law at Al Fayama confirmed that the newborn should have exclusive breast feeding till the age of 6 months without the integration of any other type of food. In case the mother gets pregnant while breastfeeding, she stops giving the child her milk at the age of one year while if not

she can continue with breast feeding till the age of two years. The mothers-in-law stated that the child constant crying is a sign of hunger and milk insufficiency especially if he/she stops crying once offered something to eat, in such conditions the mother should introduce other types of food to the newborn. Mothers-in-law at Shotb acknowledged the importance of an exclusive breast feeding till the age of 6 months and that weaning should be completed at the age of 18-24 months not before, except if the mother suffers from milk insufficiency. Breast pumping was not known at all at Shotb, and in case the mother has to go out leaving the child with someone, he/she can eat yogurt until the mother comes back to breastfeed him/her

Nutrition after 6 months

At Al Fayama, mothers-in-law reported that by the age of 6 months, the child starts to eat small amounts or lick whatever the family is having for food; in addition, they specifically buy yogurts for the child. Mothers-in-law stated that some families provide the boys with bigger portions of food than girls. When asked about what could be a healthy balanced meal, they answered a meal that contains vegetables, rice and chicken with butter. They also added that green salad is beneficial but if tomatoes get expensive, they cannot afford providing it to their children. They also mentioned cheese, honey and eggplants as highly nutritive types of food.

Mothers-in-law from Shotb stated the highly nutritive food as the food cooked with butter; they said they would add more butter to the food cooked for the mother after delivery along with honey, soup, fenugreek and green salad, meanwhile the mothers don't usually have an appetite for food. They said they are the ones in charge with regards to nutrition and feeding issues, they make decisions about the types of food to be bought and meals to be prepared...etc. They said they have greater experiences than their daughters-in-law and that eventually they are the ones to decide what the child should eat or not eat, giving the examples of yogurt, mashed potatoes as the most common semisolid types of food introduced to their grandchildren after the age of 6 months. They also admitted there is no gender based discrimination in the amount or type of food given to the grandchildren, although fathers may not be happy for having a baby born girl.

Baby's Growth Development

. Mothers-in-law at Al Fayama highlighted that the health conditions of the newborn can be very bad if the health conditions of the mother while pregnant were bad or if she has delivered so many times, in such cases the newborn can be born weak and/or with a low birth weight. Only one participant reported seeing growth charts on the walls of a healthcare unit.

At Shotb answers were not very different; mothers attributed the low birth weight of a newborn to the malnutrition of the mother both during pregnancy and after delivery affecting the breastfeeding. They said children are usually weighed in the health care units at the vaccinations times, and sometimes in private clinics as a part of the medical examination if the child develops any sickness.

Respiratory System Problems

When asked about cough, mothers-in-law from Al Fayama mentioned cold air currents, cold drinks, smoke as the main causes. One other cause they specifically mentioned was the smoke resulting from putting their garbage (including used plastic and paper stuffs) to fire in order to get rid of it and create a fire for cooking. According to them, the symptoms denoting pneumonia are fever and rigors.

At Shatb, mothers-in-law mentioned fans, cold air currents, taking a cold shower and the father smoking in the surroundings as the main causes for developing cough. For them, symptoms of pneumonia were dyspnea and wheezing.

Family Planning

The average number of children per family at Al Fayama is 5 children. Mothers-in-law wished family planning has existed long ago. They stated the most commonly used contraceptive methods in the village were the loops, injections and pills, the problem with the loop being vaginal bleeding and with the pills being incontinence. Mothers-in-law stated that the mothers usually go to the healthcare units to choose or change the contraceptive method and that diabetic and hypertensive ladies should not by mean take contraceptive injections. They had an opinion about the relation between the number of the pregnancies and the health status of the mother stating that the number of pregnancies does not negatively affects the health status of a lady, and the argument was that all ladies from their generation have conceived several times yet they are doing well and enjoy a good health and shape. According to them, men are the ones who decide on the number of children, some may think two children is enough, others may wish for much more.

At Shatb, mothers-in-law were aware of the importance of family planning explaining that distant pregnancies would decrease the risk of having a weak malnourished newborn and allow time for a better care for the previous child. They highlighted the importance of leaving at least two years between two consecutive pregnancies for a mother who had a C-section delivery. They said some mothers may not use contraceptive methods because their husbands want to have a great number of children, and they cannot disobey them. They finally confirmed that the treating physician would give the young mother tailored advices regarding family planning, and when asked about contraceptive methods, they mentioned injections and loops as the most commonly used, although loops may induce hemorrhages.

4.2.3 Fathers

Healthcare services

Eight fathers attended the focus group discussion at El Shatb village and a total of 6 fathers at Al Fima village. According to the fathers, the health care services in the village are provided through the local Health Care unit and private clinics which are the most accessible option. They highlighted the limitations of the primary health units like lack of services and timing as one of the participants mentioned “PHU has only vaccination services and stop working at 12:30. There are no services anymore”. The second option is usually university hospitals and health insurance hospitals with high recognition for El Kasr El Eini hospital. Fathers recognized the quality of workers in these places however they noted difficulty of accessibility like transportation. One of the fathers said “It takes thirty minutes to reach Assiut from here by car, we get lost when someone get tired in the night as there will be no transportations”. The third option was the private clinics which usually have the best services especially if the doctor has good reputation. The main difficulty to use these services is the financial cost. The fathers showed willing to secure money for clinics in special cases one of the fathers said “Once I paid 300 LE for one consultation but the kid was really tired”.

The frequency of prenatal visits was also affected by the financial accessibility and the health situation of the pregnant mother. They all valued the importance to have regular pregnancy follow up however they mentioned that their wives went few visits range from two to four for financial reasons.

The women who have complications usually go more often to deal with their complications. Few fathers managed to take their wives to antenatal visits through using the university hospitals.

Mothers and Fetal Health during pregnancy

The pregnant women do the daily work of the house normally. One of the participants said “It doesn’t matter if she is pregnant or not, she will do the house work. May be member of her family help her like her sister or mother. The husband may help but it’s rare”. Fathers believed that normal labor is the best option and linked the post labor problems with the caesarian section. They were also in favor of breast feeding. The most mentioned dangerous signs for the pregnancy include bleeding and lack of child movement. The husbands mentioned that usually mothers go with the woman when she visits the doctor but they also confirmed that they will make sure they have immediate transportations.

Delivery operations

The decision of the delivery is determined based on the available information about reputation of the doctor, proximity to the house and financial costs. The outcome can be different based on these factors. The lady can deliver through the assistance of her assigned doctor, choose another doctor with better reputation or count on midwife. The decision of delivery location is joint decision between the couple and usually the mother in law or the mother joins the pregnant lady.

Mother’s Health after Delivery

Post labor visits and children care depend more on the financial situation of the father. They felt it doesn’t have big value compared to antenatal care. They raised the exception when the woman is sick or if the baby has some complication like jaundice. One of the fathers said “We have to take care of jaundice as the baby might need to go to incubator, this is important”. Some fathers mentioned that social workers of the PHU come from time to time to check on the mothers and other thought they can count on the PHU for the post natal period even if it’s not efficient. One father said “the neonate doesn’t need much, he just go to the PHU to measure his weight then he doesn’t go to health facility unless he is sick”. According to the fathers; the most important thing they care about for their babies and delivered mothers is the ventilation and the cleaning.

The Newborn’s health

According to the fathers, mothers are the primary caregivers regarding their newborns. The mothers are usually helped by family members. Mothers and mothers-in-law are the ones who usually notice the newborn’s illness, while fathers are out of the house most of the time. According to the fathers, the main health issues experienced with their newborns are, namely: jaundice, loss of skin elasticity, chest allergy, and breastfeeding refusal. In case of these symptoms, both of the father and mother accompany their newborn to the healthcare provider unless they have issues with each other. There is neonatal intensive care unit at KafrShokr hospital, but available places are very limited. In private hospitals, the newborn incubation cost varies between EGP200 to EGP1000 per night.

Diarrhea

Lack of clean environment and care with the child is the main reason for diarrhea according to the fathers. This is in addition to seasonal changes and exposure for the cold weather. The main symptoms of diarrhea according to the fathers are dehydration and exhaustion. Some fathers

considered breast feeding in unhygienic environment is reason for diarrhea and this is why the women should stop breast feeding her child during diarrhea. On the other hand some fathers believed that breast feeding during diarrhea is important to compensate dehydration. There was agreement that child wouldn't go to the hospital unless he develop noticed symptoms like wrinkle of skin, change of color. One of the fathers said "If the child had recurrent diarrhea and situation got worsened, I take him/her to the hospital". All the participants agreed on the importance of having fluids during diarrhea but they couldn't identify any details related to oral rehydration solutions or other drinks.

Early Nutrition and Breastfeeding

The respondents were not also knowledgeable about breast feeding but they came up with consensus that breast feeding is the best option and had to start soon. Few fathers provided extra information like one of the fathers who claimed that "Only mothers milk. No solid food before 40 days after that some soft food can be gives". The majority were flexible about the breast feeding duration as some said it can be 6 months or year or two "depend on the baby". They also discussed the option of cow milk or food supplement however the information were incomplete and mostly inaccurate.

Nutrition after 6 months

There was a lot of guessing in this question and the fathers shared their own experiences or what they heard. Most of the parents confirmed the importance of the breast feeding again which was reflection from the previous question. This is followed by guessing or memorizing what kind of food their children started with. Some suggested yoghurt while others rice or biscuits or honey or even green salad. They came back to the financial factor as determinant for their choice. One of the fathers said after long thinking "They will eat what we eat, why we should think for special food for them, we can't afford that". When we asked what they think is the best food irrespective to its availability they mentioned items like egg and beans.

Baby's Growth Development

Again fathers didn't seem to have extensive information about the growth of the children. They decided that the PHU take care of that by weighting the children but they stressed the bureaucratic system in these facilities. The respondents reported that they now the growth chart but we couldn't confirm their knowledge depth in this area. They provided some symptoms indicate the lack of the growth of the child like pale skin. According to the participants the children vary according to their nature as one of the fathers explained "Every child has his own nature; some children are born weak or eat less or born pre mature".

Respiratory System Problems

Cold weather, smoke and flu are the main reasons for respiratory tract infection based on the interviewees' opinion. They talked about the importance of proper worming for the kid body during winter as protective factor for the respiratory tract infections. There was consensus about the hazards of smoking in the presence of the children and they considered such behavior is a big mistake. The most common symptoms mentioned for the respiratory tract infection were fever, difficult breathing and cough. If the baby got such symptoms; they usually try to treat him/her first then they might take him to the PHU with special focus on the mother role. One of the fathers expressed that "When the child get tired his mother try to treat him but if she failed then she take him to the PHU".

Family planning

Some fathers still not convinced with the family planning process and consider it against religion. This could explain high average number of the children (five children per family). One of the fathers said “If the man has religion; he wouldn’t do family planning”. More the half of the fathers were fine with family planning. The main two reasons for using contraceptives were the financial reasons. The second main reason for using family planning is to ensure the kids have good health. There was impression that having many kids in row will affect the health of the children. The agreement between the couple was indirect concern. “Sometimes women need more children and stop contraceptives against the will of her husband in other cases the father insist on more babies when the wife don’t want” said by the one of the fathers in El fima village. Other men felt that the decision is completely in the hands on the man. Fathers didn’t have much knowledge about the family planning methods but they felt it’s important for the women to feel comfortable with the tool she use and change it when it causes any problems. None of the interviewees is married to more than one wife but they reported it does exist within limited contexts.

Baby’s gender

Most of the fathers claimed equality between girls and boys; however they admitted the existence of favoring for the boys (especially first child in some cases). One of the fathers said “Now we treat them equally now but in the past boys were favored of course” Another father said “I know a woman who got pregnant ten times to have a boy child”. The fathers stressed on the value of giving care and attention to the family and ensure the whole family meets together for different activities like eating.

4.5 SOHAG GOVERNORATE

4.5.1 Mothers

Nine mothers attended the focus group discussion held in El Mohamda El Bahareya village and another group of mothers attended another focus group discussion at Nagaa El Naggar village.

Healthcare Services

When asked about the available healthcare services in the village, the mothers stated that these are, namely; the Health Care units, the general hospital and private clinics. The units provide prenatal check-up services and family planning guidance and services for the villages but are deemed ill-equipped, the quality of the services they provide is unsatisfactory, and are not suitable for C-sections and other complicated delivery operations; which in that case, take place at the hospital or any private clinic. Four of the mothers gave birth at the hospital while the others at a private clinic. Almost all the mothers stated that they prefer to visit private clinics and the hospital because of better equipped facilities with up-to-date medical devices, while some of them prefer visiting the health care unit because of its location in the center of the village, it is financially affordable and has suitable working hours. Moreover, the general hospital does not have outpatient clinics. Check up fees and the cost of different healthcare services is different in the hospital and at private clinics. Regarding the health care expenses, mothers always give a priority to their children health.

Mothers and Fetal Health during Pregnancy

Some of the mothers assumed that a usual schedule for their antenatal care visits is once every two months while the majority of the mothers follow up their pregnancy only when they feel tired or suffer from the abdominal aches and pain. Wives and husbands usually decide jointly whether to follow up their pregnancy or not. The Health Care service provider is chosen based on the mother's comfort towards a specific service provider and/or a physician's reputation. According to the mothers, dangerous signs during pregnancy can be illustrated in high blood pressure, vaginal bleeding, fever, amniotic membrane rupture, vomiting and Eclampsia. If any of these symptoms occur, they would have to contact their healthcare provider. With regards to iron intake, some mothers took iron pills during their pregnancy and stated that iron supplements are available at private pharmacies and the Health Care unit for free.

Delivery Operations

Almost all of the participants had a negative experience while giving birth at the general hospital. One of mothers stated that the doctor started hitting her lower abdomen and insulting her to stop screaming while giving birth. While another stated that she had an appointment at the hospital on her due date and could not find any practitioner; at the end, a nurse helped the mother deliver the baby. C-sections are generally expensive in private clinics and their cost may vary between EGP1000 and EGP1500. The physician who follows up with the mother's pregnancy is the one who decides the place of birth depending on the mother's condition and baby's health.

Mother's Health after Delivery

Some mothers stated that the healthcare unit does not follow up with the mother during the puerperium and others stated that it actually does and provided them with advice regarding the right methods of taking care of their newborns. Family members and neighbors help the mother acquiring the information she needs about raising her newborn and try to provide her with the needed care and attention. During this period, the practitioner is contacted only in case of emergency.

The Newborn's Health

Mothers agreed that the newborn is immediately taken to the hospital if he/she gets sick. They estimated that the jaundice, fever and diarrhea as the main health issues experienced by their newborns within the first two weeks after delivery. One of the mothers stated that her newborn suffered from pneumonia because he was not immediately washed, dried and covered after birth.

Diarrhea

According to the mothers, a newborn can suffer from diarrhea if he caught a severe cold, fever or intestinal flu. Certain types of food consumed by mothers such as chili and black pepper, and formula milk can also cause the newborns to suffer from diarrhea. In these cases, mothers give their babies medication such as Antinal and maintain constant breastfeeding. If diarrhea persists for more than two days, the newborn has to visit a physician. One the participants provided that in case of diarrhea, the newborn should be given mashed potatoes and chicken liver to prevent and treat dehydration. None of the mothers uses an oral rehydration solution for the treatment of diarrhea.

Early Nutrition and Breastfeeding

According to some mothers, a newborn's first oral intake should be water with sugar or herbs. According to other mothers, newborn's first oral intake should be the mother's colostrum and they stated that in the past, the newborns' first oral intake was either water with sugar or herbs. Not all mothers are aware of the colostrum and its benefits. Some mothers stated that colostrum increases the newborn's immunity to external factors and illnesses. In case of a natural birth, the newborn is immediately breastfed and in case of a C-section, the newborn is then given water with sugar as a first swallow until the mother recovers from the operation and is able to breastfeed. Some newborns may weigh less than the average weight, which is 1.5KG; in this case, the physician might decide to admit the newborn into the neonatal intensive care unit. Mothers agreed that natural breastfeeding should last at least for the first six months without any additional supplements. One of the participants introduced solid food to her newborn at 3 months. Mothers mentioned that they do not have any problems regarding breastfeeding only few of them work. Working mothers usually leave their newborns at home with a person they can trust. They are generally allowed to leave work for an hour and return home to breastfeed their newborn during the day. Additionally, mothers received some advice on the right breastfeeding methods by other mothers, family members and nurses.

Nutrition after 6 months

Mothers usually stop breastfeeding their babies after one and a half to two years after delivery. Some of them revealed that they stop breastfeeding their newborns at 3 months if they are pregnant again. A range of solid food is gradually introduced to the infant such as yogurt, rice pudding, beans, mashed potatoes, macaroni and french fries. Babies are fed only when they are hungry and gradually start eating the same food as the rest of the family. Mothers-in-law and sisters usually help the mothers take care of the newborn and prepare for them special meals. Moreover, Mothers are responsible for household meal planning, cooking and grocery shopping. Mothers acknowledge that the body benefits from a healthy meal because it contains different types of nutritional elements. According to the mothers, healthy meals contain fruits, milk, chicken liver, cheese, vegetables, salad and fish.

Baby's Growth development

Babies are weighed at each vaccination visit at the Healthcare unit or the general hospital. There are several signs of a poor newborn growth, namely; when the baby does not gain weight and/or grow taller. In these cases, mothers feed their newborns more often and allow them healthier meals and practitioners usually prescribe calcium supplements for the newborn. Few participants are aware of the Height and Weight Growth Chart.

Respiratory system problems

Mothers give their newborns medication and suppositories to treat cough. Some of the participants stated that they borrow the medication from their neighbors. Newborns are only accompanied to the physician in case of an emergency. Mothers at El Mohamda El Bahareya village do not know the symptoms of pneumonia. While mothers at Nagaa El Naggat village stated that pneumonia has mainly the following symptom: fever, diarrhea, or difficulties in breathing.

Family Planning

Family planning guidance and services are available and provided by the Healthcare unit of the village. Community health workers visit the mothers, within a week from their delivery operation, to provide them with the necessary information regarding breastfeeding and family planning. Mothers stated that these visits were not available before. Mothers believed that more awareness regarding family planning guidance and services is required. Two of the participants stated that they got pregnant despite contraceptives. They revealed that they did not discuss the use of the contraception methods with their physician. According to almost all the participants, the average number of children per family is 3 - 2 boys and one girl- . Some mothers assumed that it is preferable to leave a period of two years between each pregnancy, while others prefer frequent pregnancies without allowing for spacing.

4.5.2 Mothers-in-law

Healthcare Services and Mothers and Fetal Health during Pregnancy

Antenatal care visits and delivery operations usually take place at private clinics located in Sohag due to the poor quality of services offered by the Health Care unit and the general hospital. The Health Care service provider is chosen based on the mother's comfort towards a specific service provider and/or a physician's reputation. The majority of the participants stated that their daughters-in-law follow up their pregnancy only when they feel tired or suffer from abdominal cramps and pain. Mothers-in-law at El Mohamda El Bahareya village are not aware about dangerous signs that could occur during pregnancy. While mothers-in-law at Nagaa El Naggar village stated that dangerous signs during pregnancy can be illustrated in vaginal bleeding and back pain. If any of these symptoms occur, they will definitely accompany their daughters-in-law to their healthcare provider. None of the participants stated that their daughters-in-law gave birth before or after their due date.

Delivery operations

The delivery operation usually takes place at a private clinic because of better equipped facilities and up-to-date medical devices than the general hospital and for the families who can afford its expensive cost. According to the mothers-in-law, transportation is accessible in the village and clinics are easily reached. The group of mothers-in-law deemed the services provided by the general hospital as poor and unsatisfactory. The physician of the antenatal care services and delivery operation is the same. None of the mothers-in-law stated that their daughters-in-law gave birth at home or before their due date "mothers do not give birth at home anymore (...) it is not the case anymore".

Mothers Health after Delivery

Most participants stated that the Health Care unit does not follow up with the mothers' health after delivery or during the puerperium and no caregiver provides mothers with advice regarding the right methods of taking care of their newborns. Only in case of a C-section, the private practitioner visits the mother once. During the puerperium, mothers-in-law admitted that they helped out their daughters-in-law in ensuring their rest and nutrition. They usually advice their daughters-in-law, during this period, to avoid direct the exposure to the sun, eat well and get enough rest. Abdominal pain and fatigue, according to mothers-in-law, are the only health issues that might occur to the mothers within the first two weeks after delivery. In this case, mothers should take pain killers.

The Newborns' health

Mothers-in-law immediately take the newborn to the general practitioner if he/she gets sick. Jaundice is considered one of the main health issues experienced by newborns in the first two weeks after delivery. In this case, the infant might be in a need to be admitted to the neonatal intensive care unit.

Diarrhea

Mothers-in-law agreed that they could decide whether newborns have diarrhea or not if the infant has fever, refuses to feed or/and cries constantly. If the newborn has continuous diarrhea that reaches 5 times a day, the baby should be taken immediately to a healthcare provider. Drops and oral rehydration solutions are usually prescribed by the physician to treat newborns' diarrhea.

Early Nutrition and Breastfeeding

Newborns first oral intake should be the mother's colostrum. Almost all the mothers-in-law were aware of the colostrum and its benefits in terms of being full of nutrients and increasing the newborn's immunity to external factors; but not all of them knew when it is exactly produced. Some of them stated that the body produces colostrum immediately after giving birth, while others think that it is produced three days after delivery. If the mother is working outside the home, the baby is offered formula milk.

Nutrition after 6 months

Some mothers-in-law stated that mothers start weaning their babies at 4 months and others at 6 months. By the age of 5 months, a range of solid food is gradually introduced to the infant such as yogurt, cake, milk, rice, cereal food and biscuits. Mothers usually stop breastfeeding their babies by the age of 16 to 24 months and babies start gradually eating the same food as the rest of the family. According to mothers-in-law, an affordable healthy daily meal should include vegetables, yogurt, cereal, rice or pudding. Mothers are primarily responsible for grocery shopping and cooking meals. Mothers-in-law admitted that they participate in taking care of their grandchildren.

Baby's Growth Development

Mothers-in-law believe that there are several signs of a poor newborn growth, namely; when the baby does not grow taller and is always tired. In this case, the physician is contacted. Mothers-in-law consider that the baby must weigh at least 3KG at birth. Newborns' weight is always measured but not the height. The group of participants from Nagaa El Naggar village does not acknowledge the reasons behind poor newborn growth. None of the participants is aware about the Height and Weight Growth Chart. According to the mothers-in-law, an affordable healthy meal should include milk, eggs and fruits.

Respiratory system problems

Common cold is considered the main reason for cough by mothers-in-law. The newborn is immediately accompanied to the physician if he/she has any symptoms of pneumonia or cough. Participants do not know much about pneumonia and its reasons. Some of them consider it a common cold.

Family Planning

Almost all mothers-in-law confirmed that their daughters-in-law are well aware of the different methods of contraception such as injections, birth control pills, and IUDs. According to the mothers-in-law, the most common family planning methods are the sub-dermal capsules and birth control pills. A specific method of contraception is chosen based on the physician's decision. Mothers-in-law believe that more awareness regarding family planning issues and services is required.

4.5.3 Fathers

Approximately 10 fathers attended the focus group discussion at Nagaa El Naggar village.

Healthcare services

When asked about the available healthcare providers, fathers from both El Mohamda El Bahareya and Nagaa El Naggar village stated that these are, namely; the general hospital, the local Health Care units, private clinics, and charitable health clinics. The group of fathers stated that the local units provide antenatal care services but are not suitable for C-sections and other complicated delivery operations. They also stated that the health units as ill-equipped as they do only provide basic health services such as antenatal care visits services, X-rays and vaccines. Fathers stated that the general hospital is well-equipped and has up-to-date facilities and medical devices but it provides low quality healthcare services. Families who have the financial ability to pay high fees opt for private clinics check-ups and services as private clinics do provide better quality healthcare services than public facilities. Private clinics' fees range between EGP30 and EGP50, but are not usually financially affordable by the villagers. Most of the private healthcare providers are far from the villages and do require transportation to be reached; however, their scheduled operating hours meet the demands of all the participants.

Mothers and Fetal Health during Pregnancy

According to the fathers, a normal schedule for their wives' antenatal care visits during the 9 months of pregnancy would potentially be once every month or every three months. There is no consistent schedule for their antenatal care visits as it depends on the practitioner's decision and the mother's health condition. Some of the participants revealed that their wives follow up their pregnancy only when they feel tired or suffer from abdominal cramps and pain. Wives and husbands usually choose jointly the practitioner and the place of their antenatal care visits. Some of the fathers revealed that they are the ones who decide whether their wives would follow up their pregnancy or not. According to the fathers, dangerous signs during pregnancy can be illustrated in vaginal bleeding, fever, tetanus eclampsia, yellowish skin and cramps. If any of these symptoms occur, they are to accompany their wives immediately to the healthcare provider.

Delivery operations

Husbands and wives usually choose together the place of birth they see fit for the delivery of their baby based on their financial situation. Most of the delivery operations take place at the general hospital as it has a neonatal intensive care unit; one of the fathers stated that his wife had a problem regarding the umbilical cord while giving birth at the hospital. In case of any sudden delivery, the mother is carried to the general hospital by car or taxi. In case of emergencies, the physician is the one who decides the place of birth. C-section deliveries in private clinics cost approximately EGP1200 while natural deliveries would cost nearly EGP500. Fathers stated that none of their wives

had a C-section operation. Husbands agreed that cases of giving birth at home are becoming rare and only one wife gave birth at home.

Mothers Health after Delivery

Most of the fathers stated that, during puerperium, the Health Care unit does not follow up with the mothers' health and no caregiver provides mothers with advice regarding the right methods of taking care of their newborns. Mothers visit the physician, during this period, in case of emergencies only. Mothers receive the advice they need from other mothers in the family, sisters, mothers-in-law, and neighbors. Family members are also the ones who advise the mother regarding the importance of exclusive breastfeeding.

The Newborn's Health

Fathers are not really aware about the health issues that their newborns might experience after delivery. A low percentage clarified that the main health issues experienced by their newborns after delivery are, namely; fever, common cold and diarrhea. If the baby has any of these symptoms, he/she would be taken immediately to the healthcare provider. Sometimes, newborns are given medications without a physician's prescription. In addition, there is a neonatal intensive care unit at the hospital, with available places, costing approximately EGP100 per night.

Diarrhea

According to the fathers, the main causes of diarrhea for the newborns are, namely; teething, the flu and pollution. In case of diarrhea, fathers usually give their newborns vitamins and an oral rehydration solution. Some fathers stated that they would take their children immediately to see a practitioner in case of diarrhea because it may cause severe dehydration for the newborn. Others stated that they contact a physician only if the diarrhea persists and is accompanied by fever.

Early Nutrition and Breastfeeding

According to the fathers, exclusive breastfeeding should last from 6 to 30 months. Their wives feel that their body is not producing enough milk when their baby cries constantly and/or does not sleep at night. In this case, the step to take is to add formula milk to their breast milk daily intake. Formula milk costs EGP3, but is rarely available. Fathers usually have to replace it by another one; which is more expensive. Working mothers have three months paid leave and after this period, they have no choice but to leave their newborn with someone they can trust at home. Newborns are given formula milk until their mothers return home from work and are able to breastfeed them.

Nutrition after 6 months

Some fathers stated that they started weaning their babies at 40 days, 3 months, and/or 6 months. A range of solid food is gradually introduced to the newborn such as honey, juices, yogurt and meatballs. Mothers usually stop breastfeeding their babies after 15 months. The baby at this age gradually begins to eat the same food as the rest of the family. Fathers and mothers are responsible for the grocery shopping. According to the fathers, an affordable healthy daily meal includes cereals, vegetables, protein, lentils, milk, eggs, fruits and salad. Unfortunately, not every father is capable to afford the price of healthy food on a daily basis.

Baby's Growth Development

The main signs behind a baby's poor development, according to the fathers, are: if the baby is not growing taller and/or does not gain weight. According to one of the participants, genetics play a powerful role regarding the development of the newborn. The baby is weighed only when he gets sick or during vaccination visits. None of the participants is aware of the Height and Weight Growth Chart.

Respiratory System Problems

Fathers give their newborns medication and suppositories to treat cough and sometimes newborns are given medicines without a physician's prescription. Newborns are only accompanied to the physician in case of emergency. According to some fathers, the main symptoms of pneumonia in newborns are fever and difficulties in breathing. Fathers do not know much about the causes of pneumonia. Also, some of the participants stated that their newborns are affected with pneumonia two to three times per month.

Family Planning

Family planning guidance and services are provided by the Health Care unit; however, these services are deemed unsatisfactory by the fathers. Mothers are more aware than the fathers about the various contraception methods and they are the ones who decide the family planning method to be used. One of the fathers determined that he uses condoms as a contraception method. Fathers stated many disadvantages of contraception methods, namely; IUDs cause irritation and are uncomfortable for men during sexual intercourse, injections are harmful for women, pills can cause women to gain weight and contraceptives have negative effects on breastfeeding. Additionally, the average number of children per family ranges from three to four children. Unanimously, fathers agreed that it is preferable to leave a reasonable period of time between each child ranging from 2 to 6 years. The main advantage of family planning is to keep mothers in a better health condition.

4.6 QENA GOVERNORATE

4.6.1 Mothers

Healthcare Providers

A focus group discussion was conducted at El Hel'la Community Development Association in Qous district and attended by more than 10 mothers from the village. Another focus group discussion was conducted at the Community Development Association at the Center Point of Naqada at Kom El Dabe' village and attended by 9 mothers who have children less than two years old. All the participants belong to the age bracket of 20 to 45 years old. Mothers stated that they used to go to the Health Care unit if they need any healthcare services; while others who can afford to pay higher fees go to private clinics as they provide better healthcare services. The Health Care units lack up-to date medical devices, sufficient physicians, and a good quality of healthcare services; however, the units have better equipment than the general hospital and a constant practitioner who cares about the patients. The general hospital does not have enough physicians as well. Also, the majority of the mothers stated that the health care units provide family planning guidance and services. From another side, mothers prefer to go to private clinics because physicians are qualified regardless of the expensive cost of check-ups that can reach EGP30 and the late working hours. The majority of

mothers followed up their pregnancy at a private clinic and one of them stated that she visited the health unit every 15 days during her pregnancy. The majority of the mothers prefer the clinic for delivery and deliveries are conducted at the general hospital only in serious cases. Also, the child care and follow-up is usually conducted at the clinic as well. The closest healthcare provider is located 5 km away from the village, which requires several means of transportation especially in case of sudden delivery. Mothers stated that they prioritize their health expenses according to the extent of the illness of family members; their second priority is any housing requirement. According to the mothers, choosing the healthcare provider depends on the provision of better healthcare services and medication.

Mothers and Fetal Health during Pregnancy

During pregnancy, the mothers agreed that a usual schedule for antenatal care visits to the general practitioner would be once per week or per month, or every 15 days. However, the majority of the mothers at both villages stated that they conduct antenatal care visits to the general practitioner only if they feel sick or when it is a necessity. One of the mothers implied that her antenatal care visits were on a monthly basis and the appointments of these visits were scheduled by the physician. The mother is the only person who decides to follow up her pregnancy with a specific healthcare provider based on her health condition. According to the mothers, dangerous signs during a pregnancy can be illustrated: in albumin embryonic, poisoning, swollen face and legs, fever, and vaginal bleeding. All mothers stated that they took Tetanus injections. The majority of mothers were following their iron intake and taking iron pills and other medicines such as Fero6 injections, Feroglobin, and Tocolytics injections. These injections were expensive (EGP3 to EGP10) and available at private pharmacies.

Delivery Operations

Most of the mothers gave birth at the private clinic except for one who gave birth at the general hospital. All the mothers gave birth naturally with no risks. Husbands and wives usually choose together the place of birth they see fit according to the healthcare provision, the general practitioner's experience and skills and their financial condition. They all agreed that they schedule the place of delivery a week prior to the due date. They all stated that no deliveries are conducted at home anymore. The C-section at the general hospital costs EGP150 and EGP1500 at the clinic; however, the clinic is 30km away from the village. None of the mother gave birth before their expected due date. In case of any emergency during delivery, the practitioner transfers the case to the general hospital with private transportation.

Mother's Health after Delivery

Most mothers agreed that there were no follow up visits during the puerperium period from the practitioners; however, nurses from the Health Care unit or representatives from CDAs visited the new mothers and provided them with information on the right methods of taking care of their health and their newborns'. The practitioner advised them directly after the delivery to exclusively breastfeed. Additionally, mothers mentioned that these advice-providers have told them about a red capsule which was not commonly available; but a mother stated that she was given this capsule at the Health Care unit. The majority of mothers have not followed up on their health condition after delivery unless they were suffering from serious health conditions. During the puerperium, husbands do not provide any needed care to the mothers; in fact, in Upper Egypt, it is known that the wife stays at her mother's house and she is the one responsible for taking care of her during this period of time. None of the mothers faced any problems after delivery. Health problems that might occur for the

mothers within the first two weeks after delivery are, namely; vaginal bleeding, breastfeeding problems, dryness of the mother's milk, colic and fever. In case any of these symptoms occur, the mother should visit her healthcare provider.

The Newborn's Health

All participants estimated that the main health issues experienced by their newborns after delivery were, namely: cough, colic diarrhea, constipation, fever and jaundice. The newborn is usually taken immediately to the healthcare provider by anyone available at home if he/she has any of the above symptoms.

Diarrhea

Diarrhea occurs if the newborn is teething, if there is a high degree of pollution in the area, if the newborn was subjected to any contaminated surfaces, and if the baby has a common cold and/or has food poisoning. Diarrhea has the following symptoms: fever, food and breastfeeding refusal, teething, tiredness. All mothers agreed that if the newborn suffers from severe diarrhea, they must take the baby immediately to the healthcare provider. If the newborn suffers from mild diarrhea, they give the baby fluids such as cumin, cilantro, anise, lemon drinks, as well as medication prescribed by a physician, or buy directly a medicine from private pharmacies without conducting a prior check-up. The physician sometimes advises the mother to maintain exclusive breastfeeding if the newborn is suffering from diarrhea as well as avoid giving the baby fluids. The health practitioner can prescribe an oral rehydration solution for the newborn to compensate for the lost body fluids. According to the mothers, babies are fed boiled food and potato, but not yogurt to treat diarrhea.

Early Nutrition and Breastfeeding

Most mothers implied that the newborn first oral intake should be from the mother's breast (colostrum) and if the delivery operation is a C-section, the newborn first oral intake should be anise, caraway or boiled herbs. Also, they agreed that they feed the baby the mother's colostrum because it increases the newborn's immunity; therefore, the newborn should consume it as long as it is available. The mothers who mentioned that herbs are the first oral intake for newborns in case of a C-section were advised to do so by their mothers-in-law saying that the milk would only be produced after three days of the delivery date. Mothers-in-law have a strong say regarding baby's first oral intake. None of the mothers there had a C-section. According to them, their own mothers are usually the ones who clean the umbilical cord for the baby with antiseptic cotton full of alcohol and none washes their hands beforehand. Besides that, few mothers said that they placed their babies on their breasts immediately after delivery; others stated that their newborn was immediately taken away from them to be cleaned and dressed. One mother clarified that when her baby refused exclusive breastfeeding within the first six months, the physician prescribed the baby formula milk (Promeel) that was available at the private pharmacy for EGP17. Another mother stated when her baby refused exclusive breastfeeding, she gave her yogurt during the first six months as advised by her sister, but the physician stopped her and prescribed formula milk instead. Others said that they gave their babies formula milk besides exclusive breastfeeding as a daily intake for their newborns. According to the mothers, exclusive breastfeeding should last for one year and half, one year and 8 months, or two years maximum. Mothers stated that no one has tried breast-pumping. In addition, their mothers and relatives taught them the appropriate way of breastfeeding. They said that dates and honey help

increase the quantity of breast milk. None of the mothers present at the focus group discussion was a working mother.

Nutrition after 6 months

Most women said that babies must be exclusively breastfed until they reach 6 months. Some mothers fed their babies yogurt after 4 months and others fed them formula milk with breast milk as their daily intake. After 6 months, the practitioner advises the mother to give the baby cereal food from the pharmacy, yogurt, rice, yolk, mashed potatoes, apple and fresh juices. Working mothers take three months of paid maternity leave and when they return to work, they take one hour break for breastfeeding but these mothers usually breastfeed their newborns before they leave for work and leave bottles of formula milk for the baby at home. Most probably, the mother's mother is the one responsible for the baby in the absence of the mother. When the baby is weaned, he or she can eat everything gradually and is fed the same food as the rest of the family. The baby can eat several times per day that reaches up to six meals. One of the mothers stated that she offered her daughter of 8 months herring. Mothers stated that their mothers and mothers-in-law participate and help in preparing food for the baby and the rest of the family. The husband is usually responsible for buying the food and the wife for listing the food needed based on the husband's economic status. They implied that balanced and healthy food is the one that contains high nutritional values and vitamins such as poached eggs, yogurt, milk pudding, yolk, beans green vegetables, milk and beans; however, they stated that they cannot all afford to prepare healthy meals daily.

Baby's Growth Development

According to mothers, the average weight of a newborn ranges between 2.45KG to 3KG. If the newborn weighs less than the average weight, the baby is deemed to have a poor health condition and should be examined by a physician and most probably be admitted at the neonatal care unit - costing EGP28 per day at the general hospital. According to the mothers, babies have a normal growth rate when they actually gain weight. Most of the mothers said that a poor growth of the baby appears from the physical structure of the baby and no measurements are needed to notice that. In addition, they stated that the main causes of baby's stunted growth or thinness are: eating one type of food and suffering from hereditary conditions. However, mothers are not aware of the main reasons for baby's poor development. Three of the mothers stated that their children suffer from growth deficiency and one of reasons behind this deficiency is the lack of calcium that should be compensated by milk and yogurt. Additionally, mothers mentioned that the physician at the healthcare unit measures their baby's weight at each vaccination visit (every 2 months approximately), but does not measure the baby's height. Only one mother is aware of the Weight and Height Growth Chart and stated that it is included in the health chart of the baby; the other mothers expressed their interest regarding getting acknowledged with the chart so as to follow up their babies' development.

Respiratory System Problems

Common cold, the flu and indirect smoking are the main causes behind newborns' cough and pneumonia and in this case, mothers give their babies hot fluids besides medication such as Bentamix or Farcolin as prescribed by the physician. Besides the fluids and the medicine and if the cough is accentuated, they take the newborn immediately to the practitioner. Pneumonia symptoms in newborns are known by some mothers, namely; poor growth, difficulties in breathing, fever and food

rejection. The rest of the mothers are not aware of pneumonia's symptoms. No mother mentioned that her baby was subjected to pneumonia before.

Family Planning

Some mothers stated that family planning guidance and services are available at Qous district, whereas others stated that they are not available at the healthcare providers of the district especially the contraceptive injections. According to the mothers, the community health workers provide them with the needed information regarding family planning guidance and services. Sometimes at the health unit of Kom El Dabe, during the vaccination visit of the baby, practitioners advise the mothers about family planning services. In addition, the average number of children per family ranges from two to five children. None of their husbands is married to a second wife. Mothers believe that leaving a reasonable period of time that ranges between two to four years between each child is considered an advantage of family planning. Moreover, mothers are the ones who decide which contraception method to use after agreeing with the physician; however, only one mother stated that her husband prevented her from using any kind of contraceptives. The knowledge of the mothers at both villages regarding family planning is weak and the mothers asked to raise their awareness about family planning guidance and services.

4.6.2 Mothers in Law

Healthcare Services

Mothers-in-law complain that the Health Care unit provides very poor quality services. Mothers-in-law stated that their daughters-in-law conduct antenatal care visits at the local Health Care unit, private clinics or the general hospital. They also stated that private clinics provide better health care services than the Health Care unit and have a gynecologist; regardless of the expensive check-up fees. Moreover, daughters-in-law are usually the ones who suggest following up their pregnancy and search for the better healthcare provider.

Mothers and Fetal health during pregnancy

During pregnancy, mothers-in-law provided that the schedule for their daughters-in-law antenatal care visits may vary according to their medical condition and the normal schedule for conducting antenatal care visits would be starting from the first month of pregnancy to the third month after delivery. In addition, the mothers-in-law encourage their daughters-in-law to follow up their pregnancy regardless of the gender of the fetus. Their daughters-in-law would normally visit the practitioner only if they feel tired or suffer from severe pain, obvious decline of fetal movement, albumin embryonic, swelling, loss of appetite, and vomiting. The antenatal care visit fee is EGP30, the check up fee is EGP5 and the follow up fee is EGP15 at private clinics. According to the mothers-in-law, the dangerous signs during pregnancy can be illustrated in vaginal bleeding, albumin embryonic, and fever. If any of these symptoms occur, they would have to immediately contact the healthcare provider. Few mothers-in-law mentioned that their daughters-in-law did not suffer from any health issues before delivery.

Delivery Operations

The practitioner decides the place of birth for the newborn based on the mother's and baby's health conditions. In general, the family's financial situation is also important to identify the place of birth. Some mothers-in-law stated that their daughters-in-law gave birth at the general hospital where the health care services were unsatisfactory, while others gave birth at a private clinic. An easy transport is usually prepared to accompany the mother to the delivery place. None of the participants stated that their daughters-in-law gave birth at home or had a premature delivery.

Mothers health after delivery

According to mothers-in-law, the Health Care units at both villages do not follow up with the mothers during puerperium. Mothers conduct follow up visits only if they suffer from a health issue or have given birth through a C-section. During this period, mothers usually stay at their mother's house where they are provided with the needed care. Mothers-in-law provide mothers with advice regarding the right methods of breastfeeding and feed them herbs, and honey with oriental butter and bread every day. They also advise their daughters'-in-law not to carry heavy things and help them around the house. According to the mothers-in-law, health issues that might occur to the mothers within the first two weeks after delivery are, namely: drowsiness and vomiting. If any of these symptoms occur, the mother should visit her healthcare provider immediately. Additionally, mothers-in-law mentioned that daughters-in-law should use contraceptives 6 months after delivery.

The newborn's health

All mothers-in-law clarified that the main health issues experienced by their newborns after delivery were, namely: fever, jaundice, common cold, rejection of breast milk and tiredness. The newborn is usually taken to the hospital by his father, mother or anyone available at home if he/she has any of the above symptoms and that according to the extent of the baby's health condition and after he/she is given liquids.

Diarrhea

The main causes of diarrhea for the newborns are, namely: intestinal catarrh, common cold, fever, lack of the mother's hygiene, microbes and food poisoning. Diarrhea has the following symptoms, as known by the mothers-in-law: vomiting and fever. If that is the case, the baby should be taken to the physician. Almost all mothers-in-law confirmed that their daughters-in-law should maintain exclusive breastfeeding for the baby to regain the lost fluids as well as feed the baby yoghurt and fluids such as caraway and anise. Only one participant stated that mothers should stop breastfeeding their babies if they suffer from diarrhea. Additionally, an oral rehydration solution should be given to the babies to treat dryness.

Early Nutrition and Breastfeeding

All mothers-in-law at Qous district said that the newborn first oral intake should be water with sugar. Whereas the mothers-in-law at Kom El Dabe' village stated that the newborn first oral intake should be the mother's colostrum as it increases the newborn's immunity to external factors and protects the baby from intestinal catarrh. Some mothers-in-law mentioned that the mother's colostrum is produced three days after delivery, while others said it is produced after delivery directly. Mothers-in-law clarified that their daughters-in-law should breastfeed their babies immediately after delivery to

quicken the process of milk production in case of a natural birth. One mother-in-law mentioned that the nipple should be anointed before breastfeeding the baby. Mothers-in-law had different opinions regarding breastfeeding after a C-section operation. Some of them stated that the mother should breastfeed her newborn after one hour from the operation; others believed that the newborn should be breastfed 1 day to 5 days after the operation. Mothers-in-law stated that daughters-in-law feel that their body is not producing enough milk when their baby cries constantly. If that is the case, the baby is fed a mixture of liquids, and cow's milk with some tea and then the mother visits the physician to be prescribed formula milk for the baby. One of the participants stated that her daughter-in-law gave the newborn formula milk without a physician's prescription and it had harmful effects on the newborn. Additionally, mothers-in-law pointed out that exclusive breastfeeding should last for six months and then, the mother introduces new types of food for the baby such as yogurt, potato, beans, eggs, and/or carrot besides breastfeeding as the baby's daily intake. The idea of pumping milk from the mother's breast is not common among the mothers-in-law. None of the participants' daughters-in-law is actually a working mother.

Nutrition after 6 months

By the age of 6 months, the newborn is fed mashed beans, molokhia with small pieces of bread and a slice of chicken, yogurt, bovine's or cow's milk, and fresh juices. Special food is prepared for the babies and he/she does not eat from the family's food. According to the mothers-in-law, a healthy meal consists of vegetables' soup, vegetables, lettuce, Arugula or/and cake. Mothers and fathers are jointly responsible for the grocery shopping.

Baby's Growth Development

According to the mothers-in-law, baby's average weight is 3KG; however, some babies might weigh 5KG upon their delivery. If the baby's weight is less than the mentioned average weight, then he suffers from a poor growth and should be breastfed more often and some tests should be run. According to the mothers-in-law, there are several signs of a poor newborn growth, namely: weight loss, baby being extremely calm, tiredness or the baby refuses to eat. Mothers-in-law usually determine whether the newborn is subjected to a poor growth from his/her basic physical structure and appearance. They consider that there are no reasons behind stunted growth except hereditary conditions and a lack of calcium. In case any of the symptoms mentioned above occurs, the baby's weight and height should be measured. Additionally, the baby's weight is usually measured at each vaccination visit.

Respiratory system problems

According to the mothers-in-law, the main reasons behind newborns' cough are common cold and cold air. The baby is then given liquids and herbs as a cough treatment. If the baby is still suffering from cough, the family buys medication from the pharmacy and if the infant is not healed, he /she would be taken to the physician. The causes of pneumonia are, namely: if the baby was subjected to air. None of them recognized the symptoms of pneumonia.

Family Planning

Family planning guidance and services are provided by the Healthcare units at both villages. Mothers and fathers usually discuss together whether to use a contraception method or not. According to the

mothers-in-law, the physician is the one who is qualified to decide the contraception method to be used by the mother. Almost all the participants stated that their daughters-in-law and their sons use contraceptive methods such as birth control pills and IUDS. Birth control pills are available at the Healthcare unit for EGP1; while they cost EGP30 at pharmacies. Mothers-in-law stated that family planning is important to leave a reasonable period of time between each pregnancy. All mothers-in-law believed that more awareness regarding family planning issues and services is required.

4.6.3 Fathers

Healthcare Providers

The available healthcare service providers, as stated by the Fathers, are the Healthcare units at villages, the general hospital and private clinics. Regarding the Health Care unit, it is well-equipped and has medical devices but lacks sufficient physicians, as the only physician is available every Wednesday. The general hospital is located 3 to 5KM away from the villages and lacks sufficient physicians as well, but has up-to-date facilities and medical devices. According to the fathers, they prefer to deliver their babies and follow up at private clinics because they provide better healthcare services, and have available medical devices and qualified practitioners. Fathers confirmed that the mother is the only one who decides whether she would follow up her pregnancy and visit her practitioner for antenatal care services. Fathers stated that their wives conduct antenatal care visits at private clinics, despite the expensive check-up fee, only if their medical or health condition requires so. Most healthcare providers operate in the afternoon; however, private clinics operate during the day and the check-up fee is approximately EGP25. Fathers clarified that they give a priority to their pregnant wife especially for buying more healthy food such as yogurt and milk.

Mothers and Fetal Health during Pregnancy

According to the fathers, the mothers follow up their pregnancy at a private clinic rather than the general hospital or the healthcare unit because it provides better healthcare services. According to some of the fathers, a normal schedule for their wives' antenatal care visits would potentially be twice during all their pregnancy period. Others stated that the schedule may vary according to the mother's medical condition. Additionally, It is always the decision of the mother to choose whether to follow up her pregnancy or not and the mother is the one who chooses her healthcare provider based on her neighbors' opinion about the physician's experience and reputation. If the mother has chosen a specific general physician, the father will not be able to change her mind. According to the fathers, dangerous signs during a pregnancy can be illustrated in a vaginal bleeding, albumin embryonic, and very poor health condition of the mother. If any of these symptoms occur, they would immediately visit the healthcare provider.

Delivery Operation

The physician who conducts antenatal care visits is the one who decides the place of delivery according to the mother's health condition. Mothers and Fathers have also a say regarding the place of birth based on the mother's and baby's health conditions. The practitioner determines the delivery due date a week prior to the operation. If the mother is in good health condition, delivery would potentially be at a private clinic. However, if the mother faces some complications during the delivery operation, she would be taken immediately to the general hospital. Almost all fathers prefer their

wives to deliver at private clinics despite the fact that in private clinics, physicians always recommend C-sections, even if not needed, to be able to bill more money. One of the fathers stated that he wanted his wife to give birth at the general hospital but she refused. Fathers confirmed that there are no more deliveries performed at home. In case of delivery, the mother should be taken by a private transportation available at the village to her healthcare provider.

Mother's Health after Delivery

During puerperium, mothers usually go to the healthcare provider in case of a C-section only. No one visits the mothers at home to provide them with information and advice regarding their health and the right methods of taking care of their newborn. There is no follow up in case of natural childbirth; mothers only visit the practitioner in case of emergency. During this period, mothers usually stay at their mother's house in order to receive the needed care and attention. Some fathers mentioned that they do not see their wives during the puerperium so as not to stop her breast milk. Moreover, fathers stated that newborns should be taken to the general physician during the first 40 days after delivery as well as if the newborn is suffering from any health issue. According to the fathers, mothers suffer from health issues if they are pregnant with a boy more than if they carry a girl. After the puerperium, mothers start seeking a suitable contraception method. The health problems that might occur for the mothers within the first two weeks after delivery are, namely: preeclampsia and postpartum depression.

The Newborn's Health

Fathers stated that the main health issues experienced by their newborns within the first two weeks after delivery are, namely: jaundice and fever. If that is the case, the baby is given suppositories but if the baby shows no sign of healing, he/she would be taken immediately to the healthcare provider. Fathers revealed that their wives have more information concerning newborns and the health issues that they might experience than themselves. Fathers often accompany the mothers while seeking the child's physician.

Diarrhea

Dryness and increased stool are considered the main symptoms of diarrhea. According to the fathers, a decrease in breastfeeding can cause diarrhea. Fathers do not have enough information regarding diarrhea's symptoms and reasons in newborns. They usually consider that mothers are more aware of these issues. In case of diarrhea, the baby is fed liquids and then taken to the physician if he/she has severe diarrhea to be prescribed the oral rehydration solution. If the baby is old enough, he/she is given medication without any prior check-up.

Early Nutrition and Breastfeeding

According to the fathers, the average weight of a newborn should be 3KG; however, one father stated that one of his baby's relatives weighed 8KG at birth. Fathers clarified that the physician is the only one who decides if the baby's development is poor. Additionally, mothers feel that their breast milk is not enough to feed their babies when their newborn cries constantly. Mothers should maintain exclusive breastfeeding until weaning their babies but if the mother has poor health condition; the baby is given solid food as advised by the physician. Moreover, besides exclusive breastfeeding, mothers give their babies anise, cereal food, and diluted goat milk within the first six months after

delivery. According to the fathers, mother stops breastfeeding her baby after two years or in case she is pregnant with another baby. Working mothers have no choice but to leave their babies with their grandmothers. The idea of pumping milk from the mother's breast is not common among the fathers.

Nutrition after 6 months

Fathers at Qous district stated that by the age of 6 months, a baby eats rice pudding, yoghurt and cereal food at any time during the day and begins to gradually eat the same food as the rest of family at the beginning of the 8th month after delivery. The fathers at Kom El Dabe' village think that the baby still does not eat solid food after 6 months. They said that if the mother has not enough breast milk then the practitioner must provide the baby with formula milk and said that the longest breastfeeding period is two years. Additionally, fathers clarified that the mother decides the type of food she needs for the house and the father is responsible for buying it, and sometimes the mother decides the type and quantity of food with the husband and mother-in-law as well as buys it. According to the fathers, healthy meal should contain potato, rice, cheese, meat, eggs, milk, yogurt fluids, soup, fruits and vegetables. Half of the fathers stated that they support their wives in taking care of the baby; playing with them, dressing them or carried them while the wife prepares the food. They implied that child care involves the participation of the husband. The mother-in-law and the wife's mother usually help in taking care of the baby. One of the husbands said that his wife works as a teacher and she takes one hour or two to breastfeed. Husbands state that none of their wives breast-pumps.

Baby's Growth Development

According to the fathers, there are several signs of a poor newborn growth, namely: extreme weight loss and thinness; which are mainly due to poor or malnutrition and fathers can notice that when comparing their babies with other infants of the same age. The majority of fathers said that a baby's stunted growth is due to heredity factors and conditions. Additionally, the physician measures the baby's weight only during the vaccination visit and that shows if the baby is growing normally. Some fathers assume that the average birth weight of a baby is from 1.5KG to 2KG, while others imply that it is from 2.5KG to 3.5KG. If the baby is premature then the newborn should be admitted at the neonatal intensive care unit. None of the fathers is aware about the Weight and Height Growth Chart.

Respiratory System Problems

Common cold is the main reason behind baby's cough, according to the fathers. The baby is given fluids and oil for cough treatment. If the baby is still suffering from cough, he /she should visit a physician in order to prescribe medicine for the baby. Pneumonia symptoms in newborns are, as known by the fathers, namely: breathing difficulties, tough cough, and chest congestion.

Family Planning

Fathers receive information regarding family planning guidance and services from their friends and no one from the health staff provided them with the needed information. They said that their wives already consult with their practitioners on the advisable contraceptive method directly after delivery. Contraception methods known by the fathers are the IUDs and birth control pills and it is mentioned that there are some methods used by men such as condoms, injections and withdrawal. The average number of children per family ranges between three to five children and none of them has a second

wife. According to the fathers, the reasonable period of time between each pregnancy should be two to four years so that the baby could receive a better nutrition from exclusive breastfeeding. The mother is usually the one who prefers to space her pregnancies and her husband agrees with her decision. In addition, the mother is the one who decides the type of contraceptive that she prefers to use without taking her husband opinion; however, at the end, the physician is the one who decides the most suitable contraception method for the mother. Fathers said that there was no difference between a boy and a girl and it is all God's will.

4.7 QUALITATIVE SURVEY RESULTS SUMMARY

4.7.1 Healthcare Providers

Primary health units are perceived by all the participants in the FGDs as a low quality health facility. There was consensus that primary health units are not well equipped and even when they are equipped, minimal working hours and physicians' shortage are the common barriers to hinder primary health units' services utilization. Primary health units critique was stronger amongst mothers-in-law compared to mothers.

When it comes to general hospitals; Lower Egypt has the same concerns regarding primary health units while the participants from Upper Egypt were in favor of using the services provided by general hospitals. This was consistent with the finding that participants from Lower Egypt count mainly on private health sector compared to Upper Egypt participants who counted mainly on general hospitals. The decision of the place of delivery is a multi-factorial decision controlled by the quality of the provided services, financial factors and availability of services itself. Quality of services is perceived to be available mainly in private sector, however they are the most expensive and couples might not be able to afford it. In addition, availability is another major factor in the decision as many participants reported that delivery services and some antenatal care services are not available either in the primary care units nor in general hospitals. Mothers considered children and chronic patients are their priority when seeking health care services. Fathers put their pregnant wives and their children as priority.

4.7.2 Natal Health during Pregnancy

The interviewees reported different schedules of ANC visits. Some women reported that ANC should be every week, while other women suggested it to be every month. Mothers in law and fathers gave wider range of visits' schedule from one visit per month to 3 visits during the pregnancy period. Irrespective to the suggested ideal number of visits, all the participants of different groups reported that mothers go to ANC when they have problem not based on a schedule of routine visits. Many women go only once or twice during the whole pregnancy period. When they were asked about the factors determine their ANC visit schedule besides facing health problems associated with pregnancy, they raised the financial issue.

The delivery decision is mainly led by the women with consideration for the father's opinion. Mothers, fathers and mothers-in-law were able to mention different danger signs of pregnancy especially bleeding and pre mature rupture of membranes. Both fathers and mothers-in-law confirmed that they will accompany the pregnant mother with dangerous signs to the health facility. On the other hand there was discrepancy in the level of knowledge about Iron intake. Lower Egypt participants

valued the Iron intake more than the participants from Upper Egypt. Most of the groups didn't recognize the right dose of Iron tablets.

4.7.3 Delivery Operations

The trend of delivery options is skewing toward private health systems. Delivery at home is mentioned as part of the past practices especially in Lower Egypt. Home delivery still happens in Upper Egypt when the midwife is trusted and certified in many cases. Delivery in public hospitals is also losing its momentum especially in Upper Egypt. Different women told negative experiences about delivery in general hospitals. However, some women still deliver in general hospitals considering the financial cost of delivery in private clinics for cesarean sections which range from 1000 to 2000LE. Fathers are more involved in the decision of the delivery compared to his minimal influence on ANC visits.

4.7.4 Mother's Health after Delivery

The common trend among the interviewees is less attention to the post natal care compared to the antenatal care or delivery. The role of the mother is maximized and the role of the father is diminished during this period. There was inconsistency of the response of the respondents about the visits performed by the nurses of the primary health units. Even the level of information provided was controversial, but we can claim that more than half of the groups didn't receive post natal visits. It's clearly correlated to the quality of service in each village. As most of the women deliver in private sector usually the physician who performed their normal delivery or caesarian section is the one who check on them after delivery. Mothers and mothers-in-law knew some dangerous symptoms but the majority thought that there is no need to follow up with health care providers after delivery.

4.7.5 The Newborn's Health

Jaundice and care of umbilical button were the most important health issues raised by interviewees. Other health problems like fever, colic, vomiting and constipation were mentioned too. When these symptoms appear, the parents take the newborn to the health facility. The mother is the major caregiver in this period.

4.7.6 Diarrhea

The different participants were able to mention the most common symptoms of diarrhea even if many fathers considered themselves not aware of these symptoms. There was also consensus about the causes of diarrhea specially the contamination with unclean utensils, mothers added teething, mothers in law added giving milk in bottles, and fathers added the breast feeding in unhygienic environment. The treatment varied slightly according to the groups; mothers believed that breast feeding and soft food is a priority treatment. The women of Upper Egypt were less aware of the value of Oral Rehydration Solutions. Mothers in law gave more comprehensive view about the treatment of the diarrhea. Fathers were more dependent on medical consultations and were not sure about breast feeding continuation during diarrhea.

4.7.7 Breastfeeding

Mother, fathers and mothers in law were aware of the importance of the colostrums. There was also consensus that breastfeeding should continue about six months before providing any solid food. However in terms of practice many women gave their children herbs, sugar and solid food before six

months. Mothers tend more to add herbs or sugar to their babies' food. All the participants were pro breastfeeding and didn't prefer using artificial milk unless there is necessary need for that. Mothers and mothers in law provide help to the mothers. Breast bumping isn't common belief or practice among the interviewees.

4.7.8 Baby's Growth Development

The participants acknowledged the importance of the weight of the child. Fathers considered the mothers the main caregiver and responsible mainly for the nutrition of the children. Mothers blamed the financial situation and the availability of the healthy food to provide the children with. All the groups agreed that medical consultation is a must when faced with any wasting problems. All the groups couldn't identify the growth development chart.

4.7.9 Nutrition after 6 months

Fathers and Mothers-in-law considered mothers are exclusively responsible for children nutrition after 6 months age to the mothers. Mothers were able to identify the food provided to the children after six months like mashed potatoes, cereals and banana. Financial factors were raised by the couples as determinant factor for the availability of such nutrients.

4.7.10 Respiratory System Problems

The participants were aware of the common symptoms of common flu and they couldn't identify the differences between pneumonia and common flu. The reasons for respiratory tract infection according to the participants were exposure to cold and smoke. Although participants identify smoke as reason for respiratory tract infection, they reported that fathers usually smoke indoors with their children around. The participants reported that they seek pharmacist or friends' opinion in cases of mild respiratory tract infection, but in severe cases they go for medical consultation.

4.7.11 Family Planning

Mothers and mothers in law can mention different family planning methods at ease. Fathers can mention one or two methods mainly pills and IUDs. The perceived ideal number of children per family is higher in Upper Egypt than in Lower Egypt. Most of the participants with few exceptions could mention side effects of the contraception mainly high blood pressure, bleeding and weight gain (fathers mainly mentioned that). The reasons for using contraceptives were financial reasons to provide more care for the children and for mother to maintain a healthy living. The decision maker of using the contraceptives wasn't coherent as in many cases it was joint decision, in some cases it was the father alone and in less common cases the mothers alone. Whatever the choice of the method, it is mainly made by the mothers after consultation with the physician. Mothers and mothers-in-law can count on receiving their contraceptives through the primary health units mostly.

4.7.12 Baby gender

There were no clear gender differences in terms of providing health services or nutritional services. The participants reported that gender differences was old practice in some families which disappeared by time. In some cases in Upper Egypt there were still some preferences for the first boy child.

5. HEALTH FACILITY ASSESSMENT SURVEY

The health facility assessment survey as previously mentioned consists of two surveys; a facility assessment and a workers assessment survey. The facility assessment was applied for evaluating the clinics/hospitals by interviewing a facility manager and a doctor/physician. The workers assessment survey was applied for evaluating the knowledge and behaviors of the facility workers towards prenatal, postnatal, and newborn care. This chapter is devoted for presenting the health facility assessment survey results. Also an In-Depth-Interview (IDI) was conducted with two pharmacy staff members per governorate as explained earlier.

5.1 FACILITY ASSESSMENT

The facility assessment survey mainly measures the quality and availability of health services and the extent to which the MNH-FP and Nutrition services are being delivered. Table 5.1 presents the percent distribution of the clinics according to the availability of some selected health services. Slightly above half of clinics (52.6%) have ANC services available for about 4 days/week on average, 52.4% have consultation/curative service for sick children available for about 6 days/week on average, 28.6% have normal delivery services available for about 5 days/week on average, and exactly one quarter have growth monitoring services available for 6 days/week on average.

Table 5.1: Availability of MNH-FP-Nutrition Services
Percentage of clinics according to the availability of health services

Service	Percentage of clinics with service available	Average Number of days service presented per week	Number of clinics
Immunization Services	13.6	7	22
Growth Monitoring Service	25.0	6	20
ANC Services	52.6	3.9	19
Normal Delivery Service	28.6	4.8	21
Consultation/Curative Service for sick children	52.4	5.8	21

Facilities' managers were also asked about the availability of some selected drugs, equipments, and supplies at different rooms in the health facility. Table 5.2 summarizes the responses of the managers interviewed. In the child consultation room, exactly half of the facilities have children scale, only 4.2% have ORS' cup, and none has watch with second hand. At the delivery room, exactly half of the facilities have infant scale, 8.3% have neonatal resuscitation devices, and only 4.2% have baby wraps. At the ANC room, about two third (66.7%) of the facilities have blood pressure machine, approximately one third have hemoglobin reagents, and exactly one quarter have working adult scale. Unexpectedly, at the child drug area, only 8% have diarrhea drugs, iron tablets & folic acid, and antibiotics, while only 4% have ORS packets, iron drops, Zinc, eye infection ointment/drop, oxytocin, and tetanus vaccine. None of the facilities have Vitamin A.

Table 5.2: Availability of Drugs, Equipment, and Supplies at the Health facility

Percentage of clinics according to the availability of drugs, equipment, and supplies at the different rooms in the health facility

Room	Drugs/Equipment/Supplies	Percentage of clinics	Number of clinics
Child Consultation Room	Children Scale Watch with Second hand ORS' Cup	50.0 0.0 4.2	24
Delivery Room	Neonatal Resuscitation devices Infant Scale Baby Wraps	8.3 50.0 4.2	24
ANC Room	Blood Pressure Machine Working Adult Scale Hemoglobin Reagents	66.7 25.0 33.3	24
Child Drug Area	ORS packets Diarrhea drugs Iron Drops Iron Tablets and Folic Acid Vitamin A Zinc Antibiotics Eye Infection Ointment/drop Oxitocin Tetanus Vaccine	4.0 8.0 4.0 8.0 0.0 4.0 8.0 4.0 4.0 4.0	24 25 24 25 25 24 25 25 25 25

About 58.3% of facilities' managers interviewed confirmed receiving help in the facilities services from local community members, and 72.0% confirmed receiving ideas and suggestions from them, as shown in Table 5.3. Slightly above three quarters of the facilities' managers (76.0%) confirmed receiving financial or in-kind support from the CDA, among which 28.0% assured that the last time the facility received these supports was from one month ago and 48.0% assured that the last time was from more than three months ago.

Table 5.3: Local Community Participation

Percentage of clinics according to local community participation

Type of participation	Percentage of clinics with service available	Number of clinics
Local community members help the facility in its services	58.3	24
Local community members provide the facility with ideas and suggestions	72.0	25
Community Development Association presented financial or in-kind support to the facility	76.0	25
From 1 month ago	28.0	
More than 3 months ago	48.0	

5.2 WORKERS ASSESSMENT

The workers assessment survey interviewed a sample of 26 workers to mainly measure the knowledge, skills and practices related to MNH-FP and Nutrition services of various cadres of health workers dealing with specific areas.

5.2.1 Health Workers Information on Prenatal Health Care

Health workers were asked a series of questions related to the prenatal health care. Tables 5.4A-I present these questions and the percent distribution of the workers responses. Workers were asked first about the importance of the information obtained from the antenatal history. About 73.1% responded that this information helps the provider to *plan for the childbirth, identify existing problems, and identify health education and counseling needs*. From workers point of view, 85% think that pregnant women should receive educational messages on three main topics; 1) *personal hygiene, rest, and exercise during pregnancy*, 2) *diet and nutrition during pregnancy*, and 3) *danger signs during pregnancy*. In addition, 53.8% of workers added that a *hemoglobin test* should be performed for every woman during antenatal care, while 23.1% stated that both *hemoglobin and a syphilis test* should be performed.

Slightly below two third of workers (65.4%) stated that the provider should tell the pregnant woman when counseling her about formulating a birth plan that *“There are ways of knowing whether you will develop a complication”*, while when counseling her about nutrition, 46.2% of workers stated that provider should tell her *“Only very anemic women need iron/ folate supplements”*, and 2.31% stated that he/she should ask her *“What do you eat in a typical day?”* in order to determine if her diet is adequate. Overall, 69.2% of workers emphasized that *if the woman trusts the provider and feels that he/she cares about the outcome of the pregnancy, she will be more likely to comply with scheduled antenatal care visits*.

Workers were also asked to state the meaning of “Focused Antenatal Care”, approximately 81% of them stated that *it is the care provided to every woman during pregnancy*. Concerning services included in the Focused Antenatal Care, 38.5% mentioned *checking the woman’s blood pressure at every visit*, 26.9% mentioned *counseling the woman about danger signs only at the last visit*, and 15.4% mentioned *checking the baby’s position at 28 weeks*.

Finally, workers were asked about what should be done with the used syringe and needle after giving a pregnant woman her first dose of tetanus toxoid by intramuscular injection. About 65% of workers stated that they should be *decontaminated before placing in puncture-proof containers*, and about 19% stated that they should be *placed in a garbage can*.

Tables 5.4A-I: Health workers information on prenatal health care

5.4-A) The information obtained from the antenatal history can help the provider to	Number of Workers give the answer	Percentage
A. ____ Plan for childbirth	0	0.0
B. ____ Identify existing problems	6	23.1
C. ____ Identify health education and counseling needs	1	3.8
A, B, and C	19	73.1
Total	26	100.0

5.4-B) Pregnant women should receive educational messages about which of the following	Number of Workers give the answer	Percentage
A. ____ Personal hygiene, rest, and exercise during pregnancy	1	3.8
B. ____ Diet and nutrition during pregnancy	1	3.8
C. ____ Danger signs during pregnancy	1	3.8
A, B, and C	22	84.6
A and C	1	3.8
Total	26	100.0

5.4-C) When counseling a pregnant woman about formulating a birth plan, the provider should tell her	Number of Workers give the answer	Percentage
A. ____ If she has no risk factors, she can give birth at home with a traditional	1	3.8
B. ____ There are ways of knowing whether she will develop a complication	17	65.4
C. ____ She should put money aside to pay for the expenses of the birth	3	12.5
B and C	1	3.8
A and B	1	3.8
No answer	3	12.5
Total	26	100.0

5.4-D) If the woman trusts the provider and feels that he/she cares about the outcome of the pregnancy, she will be more likely to	Number of Workers give the answer	Percentage
A. ____ Comply with scheduled antenatal care visits	18	69.2
B. ____ Comply with recommended treatment	1	3.8
A and B	7	26.9
Total	26	100.0

5.4-E) Focused antenatal care means that	Number of Workers give the answer	Percentage
A. ____ Care provided to every woman during pregnancy	21	80.8
B. ____ All women have the same concerns about their pregnancies	2	7.7
C. ____ Women don't need information about danger signs in pregnancy	1	3.8
A and B	2	7.7
Total	26	100.0

5.4-F) When counseling a pregnant woman about nutrition, be sure to	Number of Workers give the answer	Percentage
A. ____ Ask her what she eats in a typical day to determine if her diet is adequate	6	23.1
B. ____ Recommend that she weigh herself once a week	2	7.7
C. ____ Inform her that only very anemic women need iron/folate supplements	12	46.2
A and C	3	11.5
A, B, and C	3	11.5
Total	26	100.0

5.4-G) Focused antenatal care includes which of the following actions?	Number of Workers give the answer	Percentage
A. ____ Checking the baby's position at 28 weeks	4	15.4
B. ____ Checking the woman's blood pressure at every visit	10	38.5
C. ____ Counseling the woman about danger signs only at the last visit	7	26.9
A and B	3	11.5
B and C	1	3.8
A, B, and C	1	3.8
Total	26	100.0

5.4-H) Tests that should be performed for every woman during antenatal care include	Number of Workers give the answer	Percentage
A. ____ Hemoglobin	14	53.8
B. ____ Test for syphilis	0	0.0
C. ____ Ultrasound of baby	4	15.4
A and B	6	23.1
A and C	2	7.7
Total	26	100.0

5.4-I) After giving a pregnant woman her first dose of tetanus toxoid by intramuscular injection, the used syringe and needle should be	Number of Workers give the answer	Percentage
A. ____ Decontaminated before placing in puncture-proof containers	17	65.4
B. ____ Decontaminated before reusing them	0	0.0
C. ____ Placed in a garbage can	5	19.2
A and B	1	3.8
B and C	1	3.8
A, B, and C	2	7.7
Total	26	100.0

5.2.2 Health Workers Information on Normal Labor, Childbirth, and Immediate Newborn Care

Normal Labor and Childbirth Care

Health workers were also asked a series of questions related to their knowledge of normal labor and childbirth care. Tables 5.5A-G presents these questions and the percent distribution of the workers responses.

Workers were first asked about what is recorded on the partograph when performing a vaginal examination. About 77% of workers stated that it is the *cervical dilation of 3 centimeters*, and 30.8% emphasized that having cervical dilation being plotted to the right of the alert line indicates *satisfactory progress in labor*.

Around 62% of workers emphasized that active management of the third stage of labor should be practiced *for all women in labor*, and 38.5% of them stated that the appropriate order of steps in active management of the third stage of labor includes *controlled cord traction and fundal massage*, while 23.1% stated it includes *intravenous oxytocin, cord cutting, and fundal massage*.

If bleeding continues after delivery of the placenta using active management, the majority of workers (73.1%) agreed that, besides calling for help, the provider should *check the placenta to make sure that it is complete*. Also, 42.3% emphasized that *performing frequent vaginal examinations* helps decreasing the risks of infection during childbirth.

Finally, workers were asked about what should be done with the contaminated instruments in the labor ward. About 61.5% of workers stated that they should immediately be *washed with soap and water and soaked in 0.5% chlorine solution for 10 minutes*.

Tables 5.5A-G: Normal, Labor, Childbirth, and immediate newborn care

5.5-A) When performing a vaginal examination, which of the following is recorded on the partograph?	Number of Workers give the answer	Percentage
A. ____ Cervical dilation of 3 centimeters	20	76.9
B. ____ Vaginal temperature and wetness	0	0.0
C. ____ Position of the presenting part	1	3.8
D. ____ Degree of molding	0	0.0
A and B	1	3.8
A and C	2	7.7
A and D	1	3.8
No answer	1	3.8
Total	26	100.0

5.5-B) Cervical dilation plotted to the right of the alert line indicates	Number of Workers give the answer	Percentage
A. ____ Satisfactory progress in labor	8	30.8
B. ____ Unsatisfactory progress in labor	1	3.8
C. ____ The end of the latent phase	3	11.5
D. ____ The end of the active phase	2	7.7
A and B	1	3.8
No answer	11	42.3
Total	26	100.0

5.5-C) Active management of the third stage of labor should be practiced	Number of Workers give the answer	Percentage
A. ____ Only for women who have a history of postpartum hemorrhage	5	19.2
B. ____ Only for the primipara	3	11.5
C. ____ Only for the multipara	0	0.0
D. ____ For all women in labor	16	61.5
A and B	1	3.8
A, B, and C	1	3.8
Total	26	100.0

5.5-D) The appropriate order of steps in active management of the third stage of labor include	Number of Workers give the answer	Percentage
A. ____ Controlled cord traction and fundal massage	10	38.5
B. ____ Intravenous oxytocin, cord cutting, and fundal massage	6	23.1
C. ____ Cord cutting	4	15.4
D. ____ Injection of oxytocin	1	3.8
No answer	5	19.2
Total	26	100.0

5.5-E) If bleeding continues after delivery of the placenta using active management, the first thing the provider should do is call for help and	Number of Workers give the answer	Percentage
A. ____ Start an IV	0	0.0
B. ____ Massage the uterus	2	7.7
C. ____ Insert a urinary catheter	1	3.8
D. ____ Check the placenta to make sure that it is complete	19	73.1
A and D	1	3.8
B and D	1	3.8
C and D	1	3.8
No answer	1	3.8
Total	26	100.0

5.5-F) Which of the following will help to decrease the risk of infection during childbirth?	Number of Workers give the answer	Percentage
A. ____ Performing frequent vaginal examinations	11	42.3
B. ____ Rupturing membranes as soon as possible in the first stage of labor	2	7.7
C. ____ Routine catheterization of the bladder before childbirth	6	23.1
No answer	7	26.9
Total	26	100.0

5.5-G) Contaminated instruments in the labor ward should immediately be	Number of Workers give the answer	Percentage
A. ____ Washed with soap and water and boiled for 2 hours	4	15.4
B. ____ Soaked in 0.5% chlorine solution for 30 minutes	4	15.4
C. ____ Washed with soap and water and soaked in 0.5% chlorine solution for 10 minutes	16	61.5
A and C	1	3.4
No answer	1	3.4
Total	26	100.0



Immediate Newborn Care

Tables 5.6A-j presents the percent distribution of the workers responses on a series of questions related to immediate newborn care. Workers were asked about what immediate care includes. Around 23% of workers agreed that immediate care for normal newborn includes *skin-to-skin contact followed by placing the baby in a warming incubator*, another 23.1% agree that it includes *deep suctioning of the airway to remove mucus*, 19.2% agree that it includes *drying the baby, removing the wet cloth, and covering the baby with a clean, dry cloth*, and 15.4% agree that it includes *stimulating the baby by slapping the soles of the baby's feet*.

Workers were also asked about the first step in thermal protection for the newborn. About 53.8% stated that it includes *covering the baby with a clean, dry cloth after the cord has been cut*, and 19.2% stated that it includes *drying the baby thoroughly after the cord has been cut*. Results also show that 53.8% of workers think that *drying the baby and placing it in a skin-to-skin contact with the mother* contribute to hypothermia in newborns. Same percent (53.8%) think that *covering the baby's head, placing the baby in skin-to-skin contact on the mother's chest, and covering the baby with a blanket* can maintain the newborn's axillary temperature between 36.5° C and 37.5° C.

Slightly below three quarters of workers (73.1%) stated that the provider should tell the mother when counseling her about breastfeeding to "*Breastfeed on demand for as long as the baby wants to feed*", taking into consideration that 76.9% agree that *breastfeeding should begin within the first hour following birth*. In addition, when counseling the mother about her newborn, 76.9% of workers stated that provider should tell her to *bring her baby for a newborn care visit on the sixth day after birth, make sure that the mother understands danger signs for her baby and where to go if they arise, and help the mother formulate a complication readiness plan for her baby*.

About 46.2% of workers emphasized that the skilled provider should *put on sterile gloves* before performing an exam on a baby who is 2 hours old and who has not been bathed. They also added (85%) that care of umbilicus should include *cleansing with alcohol*. Finally workers were asked about the best way to determine if a newborn needs resuscitation. About 46% stated that the best way is to *observe respirations immediately and begin resuscitation if they are less than 30/minute*.

Tables 5.6A-j: Immediate Newborn Care

5.6-A) The first step in thermal protection for the newborn includes	Number of Workers give the answer	Percentage
A. ____ Drying the baby thoroughly immediately after birth	1	3.8
B. ____ Drying the baby thoroughly after the cord has been cut	5	19.2
C. ____ Covering the baby with a clean, dry cloth immediately after birth	1	3.8
D. ____ Covering the baby with a clean, dry cloth after the cord has been cut	14	53.8
A and B	2	7.7
B and D	1	3.8
A, B, C and D	2	7.7
Total	26	100.0

5.6-B) Immediate care for a normal newborn includes	Number of Workers give the answer	Percentage
A. ____ Skin-to-skin contact followed by placing the baby in a warming incubator	6	23.1
B. ____ Drying the baby, removing the wet cloth, and covering the baby with a clean, dry cloth	5	19.2
C. ____ Stimulating the baby by slapping the soles of the baby's feet	4	15.4
D. ____ Deep suctioning of the airway to remove mucus	6	23.1
B and D	2	7.7
C and D	1	3.8
A, B, C and D	1	3.8
No answer	1	3.8
Total	26	100.0

5.6-C) Which of the following can contribute to hypothermia in newborns?	Number of Workers give the answer	Percentage
A. ____ The baby is not dried thoroughly immediately after birth	1	3.8
B. ____ The baby is bathed immediately after birth	4	15.4
C. ____ The baby is dried and placed in skin-to-skin contact with the mother	14	53.8
A and B	6	23.1
No answer	1	3.8
Total	26	100.0

5.6-D) To maintain the newborn's axillary temperature between 36.5° C and 37.5° C it is important to	Number of Workers give the answer	Percentage
A. ____ Place the baby in an incubator	2	7.7
B. ____ Bathe the baby in warm water immediately after birth	1	3.8
C. ____ Rub the baby vigorously with a blanket	5	19.2
D. ____ Cover the baby's head, place the baby in skin-to-skin contact on the mother's chest, and cover with a blanket	14	53.8
C and D	1	3.8
No answer	3	11.5
Total	26	100.0

5.6-E) Before performing an exam on a baby who is 2 hours old and who has not been bathed, the skilled provider should	Number of Workers give the answer	Percentage
A. ____ Wash hands with soap and dry with a clean towel, then put on exam	4	15.4
B. ____ Bathe the baby with soap and water	2	7.7
C. ____ Put on sterile gloves	12	46.2
A and C	5	19.2
No answer	3	11.5
Total	26	100.0

5.6-F) Care of the umbilicus should include	Number of Workers give the answer	Percentage
A. ____ Cleansing with alcohol	22	84.6
B. ____ Covering with a sterile compress	1	3.8
C. ____ Applying antibiotic cream	0	0.0
A and C	1	3.8
No answer	2	7.7
Total	26	100.0

5.6-G) The best way to determine if a newborn needs resuscitation is to	Number of Workers give the answer	Percentage
A. ____ Wait until 1 minute after birth and assign the Apgar score	2	7.7
B. ____ Listen to the baby's heart rate	2	7.7
C. ____ Observe respirations immediately and begin resuscitation if they are less than 30/minute	12	46.2
D. ____ Perform resuscitation only if central cyanosis is present	5	19.2
B and C	2	7.7
B, C, and D	1	3.8
No answer	2	7.7
Total	26	100.0

5.6-H) Breastfeeding should begin	Number of Workers give the answer	Percentage
A. ____ After the baby's first bath	0	0.0
B. ____ When the baby starts to cry	3	11.5
C. ____ Within the first hour following birth	20	76.9
A and C	1	3.8
No answer	2	7.7
Total	26	100.0

5.6-I) When counseling the mother about breastfeeding, the skilled provider should tell her to	Number of Workers give the answer	Percentage
A. ____ Avoid giving colostrum to the newborn	2	7.7
B. ____ Establish a schedule for breastfeeding so the baby gets plenty of sleep	2	7.7
C. ____ Give the baby water after each feed	0	0.0
D. ____ Breastfeed on demand for as long as the baby wants to feed	19	73.1
A and C	1	3.8
B and D	2	7.7
Total	26	100.0

5.6-J) When counseling the mother about her newborn, the skilled provider should	Number of Workers give the answer	Percentage
A. ____ Help the mother formulate a complication readiness plan for her baby	0	0.0
B. ____ Make sure the mother understands danger signs for her baby and where to go if they arise	3	11.5
C. ____ Tell the mother to bring her baby for a newborn care visit on the sixth day after birth	0	0.0
A, B, and C	20	76.9
No answer	3	11.5
Total	26	100.0

5.2.3 Management of Complications

Tables 5.7A-I present the percent distribution of the workers responses on a series of questions related to management of complications. Around 81% of workers see that a rapid initial assessment should be carried out *for all women of childbearing age who present with a danger sign*, and that when there is an obstetric emergency, the woman and her family or support person should be informed with *what the provider thinks she/they should be told* (57.7%). If eclamptic convulsions

exist, then the most effective way to immediately control it is to *deliver the baby as soon as possible*, as said by 46.2% of workers.

Concerning newborn resuscitation procedures, 42.3% stated that they *always require the use of oxygen*, and 38.5% stated that they *should only be carried out by a pediatrician*. When performing newborn resuscitation with an Ambu bag and mask, it is important to verify that *the seal between the newborn's mouth, nose, and Ambu bag is adequate* (38.5%), and *ventilate at the rate of 60 breaths per minute if the baby is gasping* (26.9%).

Workers were asked about their knowledge of the reasons of immediate postpartum hemorrhage. About 65.4% stated it can be due to *uterine atony*, and *retained placenta*. Workers were also asked about the signs and symptoms appear when a woman has a ruptured uterus. About 77% answered with *rapid maternal pulse*, and *persistent abdominal pain and suprapubic tenderness*.

Tables 5.7A-I: Management of complications

5.7-A) Carry out a rapid initial assessment	Number of Workers give the answer	Percentage
A. ____ Only for women who present with abdominal pain and vaginal bleeding	1	3.8
B. ____ Only for women who present with vaginal bleeding	0	0.0
C. ____ For all women of childbearing age who present with a danger sign	21	80.8
A and B	1	3.8
No Answer	3	11.5
Total	26	100.0

5.7-B) When there is an obstetric emergency, tell the woman and her family or support person	Number of Workers give the answer	Percentage
A. ____ As possible about the management of the emergency	3	11.5
B. ____ As much as possible about the management of the emergency	1	3.8
C. ____ What the provider thinks she/they should be told	15	57.7
B and C	1	3.8
A , B, and C	1	3.8
No Answer	5	19.2
Total	26	100.0

5.7-C) Immediate postpartum hemorrhage can be due to	Number of Workers give the answer	Percentage
A. ____ Uterine atony	2	7.7
B. ____ Retained placenta	6	23.1
C. ____ All of the above	17	65.4
A and B	1	3.8
Total	26	100.0

5.7-D) The most effective way to immediately control eclamptic convulsions is to	Number of Workers give the answer	Percentage
A. ____ Give diazepam	0	0
B. ____ Give magnesium sulfate	4	15.4
C. ____ Deliver the baby as soon as possible	12	46.2
D. ____ Give nifedipine	1	3.8
No Answer	10	38.5
Total	26	100.0

5.7-E) Newborn resuscitation procedures	Number of Workers give the answer	Percentage
A. ____ Always require the use of oxygen	11	42.3
B. ____ Can usually be carried out without oxygen	3	11.5
C. ____ Should only be carried out by a pediatrician	10	38.5
No Answer	2	7.7
Total	26	100.0

5.7-F) When performing newborn resuscitation with an Ambu bag and mask, it is important to verify that	Number of Workers give the answer	Percentage
A. ____ The newborn's head is in neutral position	4	15.4
B. ____ The seal between the newborn's mouth, nose, and Ambu bag is adequate	10	38.5
C. ____ The baby is not covered	3	11.5
D. ____ Cardiac massage is being performed	3	11.5
A and B	1	3.8
B, C, and D	1	3.8
No Answer	4	15.4
Total	26	100.0

5.7-G) A woman with a ruptured uterus has which of the following signs and symptoms	Number of Workers give the answer	Percentage
A. ____ Rapid maternal pulse	3	11.5
B. ____ Persistent abdominal pain and suprapubic tenderness	3	11.5
A and B	20	76.9
Total	26	100.0

5.7-H) When performing newborn resuscitation with an Ambu bag and mask, ventilate at the rate of	Number of Workers give the answer	Percentage
A. ____20–30 breaths per minute if there is no chest indrawing	4	15.4
B. ____40 breaths per minute for all babies	4	15.4
C. ____60 breaths per minute if the baby is gasping	7	26.9
D. ____None of the above	6	23.1
No Answer	5	19.2
Total	26	100.0

5.7-I) Treatment of postpartum metritis includes	Number of Workers give the answer	Percentage
A. ____Discontinuation of breastfeeding	2	7.7
B. ____Bed rest and adequate hydration	3	11.5
C. ____Intravenous ampicillin, gentamicin, and metronidazole until fever-free for 24 hours	4	15.4
B and C	12	46.2
No Answer	5	19.2
Total	26	100.0

5.2.4 Postpartum Care (Baby and Mother)

Health workers were finally asked a series of questions related to the postnatal care for the baby and the mother. Tables 5.8A-H presents these questions and the percent distribution of the workers responses. During the first 2 hours following the birth, 61.5% of workers see that the provider should *measure the woman's temperature and pulse, massage the uterus, and perform a vaginal examination to remove clots*. Moreover, when counseling a new mother about breastfeeding in the 6 hours following birth, 69.2% of workers see that *she should be helped in positioning her baby so that he/she attaches properly to the nipple*.

Concerning the postpartum visits, 76.9% of workers emphasized that postpartum examination should include *measurement of blood pressure and temperature, assessment of breasts, abdomen, and legs, observation of breastfeeding, and information about contraception*. However, 53.8% of workers think mother should have a postpartum visit *only if she has danger signs*. In addition, 69.2% of them see that a history of *mother and baby* should be obtained during the postpartum visit. During each visit, 50% see that information about *problems during pregnancy, during and after childbirth, and any present problems* should be obtained from the woman, and 65.4% see that the mother should be counseled to seek care if she has *edema of hands and face, severe abdominal pain, or sore, cracked nipples, and severe headache*.

Finally, workers were asked about the procedure followed when the postpartum examination is completed. About 46% of workers stated that *the exam table should be wiped off with 0.5% chlorine solution after each use*.

Tables 5.8A-H: Postpartum care (baby and mother)

5.8-A) During the first 2 hours following birth, the provider should	Number of Workers give the answer	Percentage
A. ____ Measure the woman's blood pressure and pulse once, and insert a catheter to empty her bladder	2	7.7
B. ____ Measure the woman's blood pressure and pulse, and check the uterine tone every "15 minutes"	3	11.5
C. ____ Not disturb the woman if asleep because her rest is more important than her vital signs	3	11.5
D. ____ Measure the woman's temperature and pulse, massage the uterus, and perform a vaginal examination to remove clots	16	61.5
B and D	1	3.8
C and D	1	3.8
Total	26	100.0

5.8-B) After childbirth, the mother should have a postpartum visit with a skilled provider	Number of Workers give the answer	Percentage
A. ____ Once, at 3 weeks postpartum	2	7.7
B. ____ Once, at 6 weeks postpartum	1	3.8
C. ____ Three times: at 6 hours, 6 days, and 6 weeks postpartum and any time she has danger signs	8	30.8
D. ____ Only if she has danger signs	14	53.8
A and D	1	3.8
Total	26	100.0

5.8-C) During the postpartum visit to the clinic, obtain a history for the	Number of Workers give the answer	Percentage
A. ____ Baby only	6	23.1
B. ____ Mother only	2	7.7
C. ____ Mother and baby	18	69.2
Total	26	100.0

5.8-D) During each postpartum visit, specific information should be obtained from the woman about	Number of Workers give the answer	Percentage
A. ____ Problems during pregnancy, during and after childbirth, and any present problems	13	50.0
B. ____ Present problems only	3	11.5
C. ____ Only those problems directly related to childbirth	1	3.8
A and C	1	3.8
No answer	8	30.8
Total	26	100.0

5.8-E) At each postpartum visit, the mother should be counseled to seek care if she has which of the following danger signs	Number of Workers give the answer	Percentage
A. ____ Normal lochia, temperature 37° C, or slight breast engorgement	4	15.4
B. ____ Edema of hands and face, severe abdominal pain, or sore, cracked nipples	2	7.7
C. ____ Severe headache	2	7.7
D. ____ B and C	17	65.4
A, B, and C	1	3.8
Total	26	100.0

5.8-F) When counseling a new mother about breastfeeding in the 6 hours following birth	Number of Workers give the answer	Percentage
A. ____ Help her position her baby so that he/she attaches properly to the nipple	18	69.2
B. ____ Tell her to give breast milk substitutes so her baby will grow faster	0	0.0
C. ____ Tell her that she needs a method of contraception even if she is exclusively breastfeeding	4	15.4
A and B	1	3.8
A and C	2	7.7
A, B, and C	1	3.8
Total	26	100.0

5.8-G) Each postpartum examination should include	Number of Workers give the answer	Percentage
A. ____ Measurement of blood pressure and temperature, and assessment of breasts, abdomen, and legs	3	11.5
B. ____ Observation of breastfeeding	0	0.0
C. ____ Information about contraception	2	7.7
D. ____ All of the above	20	76.9
A and B	1	3.8
Total	26	100.0

5.8-H) After completing the postpartum examination	Number of Workers give the answer	Percentage
A. ____ The exam table should be wiped off with 0.5% chlorine solution only if there is blood on it	2	7.7
B. ____ The exam table should be wiped off with 0.5% chlorine solution after each use	12	46.2
C. ____ The exam table should be wiped off with soap and water after each use	6	23.1
A and B	1	3.8
A and C	1	3.8
B and C	2	7.7
A, B, and C	1	3.8
No answer	1	3.8
Total	26	100.0

5.3 PHARMACY STAFF IN-DEPTH-INTERVIEW

5.3.1 Queries regard reproductive health

Most of respondents in Lower Egypt agreed that questions on reproductive health are rarely asked. The interviewees provided different explanation for that was varied from saying that people have already high awareness about these issues to mentioning that people usually come to ask about the availability of certain related products (pharmaceuticals) but knowledge source is the MoH PCU's care for reproductive health. In the few cases when it happens, questions of the clients about reproductive health in Lower Egypt were concentrated on availability of specific commodities and the risk of infertility.

The pharmacies of Lower Egypt were considerably different all pharmacies they agreed that questions on reproductive health are very common and concentrated on which products are better in what situation. However accessibility of reproductive health medications was the still main concern.

Women are the one who ask more about reproductive health commodities. Majority of the questions asked by the males are usually about infertility especially for newly men. The specific questions raised by the women are delayed menstrual period and commodity to be used during lactation and

vaginal infections. The respond of the pharmacist was calming their clients worry about infertility for newly married couple and prescribe appropriate medicine match with the case for example antibiotics for vaginal infections. In few cases the service provider refuses to provide advice and recommended referral to physician. On the other hand some service providers gave inaccurate information like advising the women to use specific contraceptive method without proper assessment for the case of the client. This can create some drawbacks on the clients noticing that most of the service providers confirmed that majority of the clients follow their advices. None of the pharmacist could identify specific drugs that are usually purchased by the clients. This question was hard to answer by most pharmacies they said there is high variation according to seasonal differences.

5.3.2 Family Planning medications

Some respondents noted that female customers usually seek their birth control advice before visiting their PCU's. Respondents however indicated that customers usually procure OCP based on a prior physician prescription. They also note that IUD and injections are commonly administrated directly through MoH PCU's. Condoms were the least to be mentioned and It was mentioned twice that condoms are used more often for delayed ejaculation rather than for family planning purposes. Diaphragms are not available. All respondents indicated that oral contraceptive pills (OCP) are still the most common methods issued in their pharmacies. Microcept is by far the most commonly issued drug. One Pharmacist said "People are crazy about Microcept". The drugs dispensed in order as mentioned by the pharmacists are:

- Microcept
- Microlut
- Genera
- Triocept
- Cellist
- Condoms

5.3.3 Pregnancy related medications (Iron and Folic Acid)

The interviewers asked set of question to the service providers about Iron and Folic Acid use among pregnant women. The majority of the service providers indicated that iron and folic acid supplements commonly dispersed to pregnant on prescription basis and not based on their advice. One respondent noted "they are prescribed to pregnant ladies by default". Half of the respondents indicated they don't receive any complaints regarding to iron tablets side effects. They mentioned that they rarely receive such compliant since "females bear it for the sake of their children". Another respondent and "they don't like entering in to such topics" Another half of the respondents mentioned specific side effects like: Stomach ache and heart burn followed by constipation. Most of the service provider advised the pregnant women about importance to use Iron and folic acid during their pregnancy while few decided not to do considering this exclusive tasks for the physician.

5.3.4 Infant health and nutrition

The respondents confirmed that commonality of having questions about children health and nutrition. These questions are usually asked by women allover Egypt regarding infant nutrition after the first six months. Most of the questions come from women and irrespective to the quality of the answer of the service provider; the clients followed it mostly according to our interviewees. The common questions included;

- Females usually ask about the formula milk and nutritional supplements in case of diarrhea. For which they recommend proper hygiene and reassure that switching between different formula milk could cause mild diarrhea. One respondent noted that in severe cases he informs his customers to ask the PCU physician about lactose free formulas.
- Male questions are usually regarding the availability of subsidized formula milk, and when to start using infant's nutritional supplements.
- Few respondent noted he commonly receive questions regarding "insufficient lactation". For which they offers reassurance, recommends exclusive breast-feeding and plenty of fluids.

The interviewees were asked about the frequency of dispensing medications of Diarrhea, Respiratory tract infections, artificial milk formula and food supplements include folic acid and iron tablets.

5.3.5 Diarrhea

Some respondents indicated that anti diarrheal drugs dispensing rates had been decreasing steadily during the past five years due to better hygiene. While the majority indicated steadily increasing rates especially for infants more than one year old considering the seasonal trend of diarrheal diseases.

For infants less than one year old, Smecta was the most common drug, followed by oral rehydrating solutions (ORS), which is mostly issued on prescription basis. The drugs dispensed in order (highest first) as mentioned by the pharmacists are;

- Flagel
- Antinal
- Amrizol
- Capect
- Choline
- Cemecta

5.3.6 Respiratory Tract Infections

The majority of the respondents perceived an increasing rate of infant respiratory disease drugs dispersion. As with case of diarrheal diseases, respondents indicated customers seek their advice only in mild (uncomplicated) cases or until they could see a physician. Responded noted prices of medications and seasonal infections affect the dispersion rate and interviewees varied in their respond to the right regimen to be followed for infected children with respiratory tract infections.

The most common recommended drugs for symptomatic relive were:

- Abimol
- Cetal
- Zyertic
- Fenistil
- Otrivin
- Sinecod

5.3.7 Artificial milk formula and food supplements include folic acid and iron tablets.

Most of the interviewees recommend initiating cereals only "regular" supplements after first six months. Respondents indicated good customers' compliance in regards to supplements, which they disperse over the counter at much higher rates nowadays; this situation doesn't apply for formula milk

which is “Controlled by financial factors”. Subsidized milk, Bablac 1 and 2, S26 are the most common dispersed formula brands, while Cerlac and Hero baby are the most commonly supplements. All respondents indicated that iron and folic acid issuing rates are increasing tremendously. Many pharmacies declined to provide the interviewers with exact amounts of the dispensed artificial milk formula and food supplements. The table below explains the data provided by the interviewees about their food supplements dispenses.

Table 5.9 Food supplement dispensed

Gov.	Formula Milk	Supplementary food	Iron	Folic Acid
Sharkia	Quota	5-6 (cerelac)	10	10
Asuyt	Quota plus 1-3	10-15 (cerelac)	30	10
Beni S.	15	10	15-20	15-20
Beni S.	Quota plus 4-8	20	20	20
Asuyt	50-70	20-30	40-50	40-50
	Of that 60% is a quota			

- Several pharmacies reported that they would dispense more formula milk if their quota of that supplemented by the government is increased.
- Iron and folic acid tablets rates are in boxes.

5.3.8 Referral to medical doctors

The question was trying to assess the reasons given by the interviewees for referral of the clients to physicians and dangerous signs that would alarm the service provider to advise the client to seek medical consultation. Some respondents indicated that they always tend to refer pregnant patients to physicians due to their fear of liability. We noted many pharmacies’ are operated by non-pharmacist; hence they avoid recommending any drugs. No pharmacist pharmacy workers said they do refer all the time if there is no prescription/ or the patient does not know what they want. The interviewee reported that they refer the patients in diseases that needed examinations (gynecological, high fever, unfamiliar to them) or if the patient returns due to chronic condition. Our team noticed that the older pharmacists are more likely to give medical advises to their customers.

Pharmacies of Lower Egypt were prompt in their response to say that most patients go to the doctor and come with a prescription this was not stated in pharmacies of Upper Egypt.

In terms of danger signs in pregnancy respondents noted; Hemorrhage, white lips, sever exhaustion, abdominal colic, vomiting, fever, and hypertension. While for infants they noted complicated cases such as Diarrhea with fever and Dehydration, in addition to lower respiratory symptoms, none responding and high fever.

5.3.9 Awareness Materials

While all respondents indicated that the presence of reproductive health and infant related informational material (e.g. posters, brochures, etc.) would be very helpful, none of the visited pharmacies had any. One pharmacist noted “such material would be helpful since many females feel embarrassed to ask regarding such issues”. One respondent indicated that he used to have such material three years ago through MoH “Isa’al Istasheer” Program long time ago.

5.4 HEALTH FACILITY SYNOPSIS

Lower Egypt

5.4.1 Sharqia

- **The polyclinic in Belbeis** is located on the premises of SEEKUM corp. This unique experience has no like in the private sector but should be thoroughly studied and imitated. This polyclinic serves the workers of the 12 factories in the group. There are patient files for all those in the group and all the students in the school within the corporation, the polyclinic serves all the health insurance patients who come to it, they also have a health insurance pharmacy within the facility (not a contracted pharmacy but an actual HIO pharmacy). They also serve the local community at discounted prices and free for those in need.

5.4.2 Qalyobia

a) Kafr Shukr

- **The polyclinic in Tesfa** is located within a mosque as are several other CDA's to be visited I had a short talk with the imam who is part of the board in the CDA as well as the Doctor in charge of the polyclinic a recommendation arose and I think it should be considered during the implementation phase, all tools have been completed successfully. **Recommendation:** conducting a workshop for all Imams and other religious leaders of the different target villages after preparation of the appropriate material between a health professional and a religious scholar this should be done at an early phase of implementation and recommendations to include the problem of malnutrition and stunting in the Friday prayers to ensure maximum community involvement.
- **The polyclinic in EL- Mofty** although the clinic is modest, it is of great potential from the enthusiasm and engagement I have seen from the personnel working there it also has the advantage of occupying the same building as the umbrella organization. The workers are very helpful punctual and have great expectations for their polyclinic. All tools were completed successfully.
- **The polyclinic in Kafr Kordy** is only open one day a week as a family planning outreach clinic it is poorly equipped and I dare to say a health hazard. I took the number of the physician whom I was told was working in the facility and did the interview over the phone and he specifically said "he has not worked in the clinic till today and he might be working with them during the project", thus sustainability of the work in this clinic after the project ends is highly questionable.

b) Qanater

- **The polyclinic in Bahada** all tools were completed successfully; 2 health care workers, both nurses one works as a full time nurse in the facility and the other is more involved with management (or so she says). We have also completed the facility check list and all the required consents. The polyclinic is considerably well equipped; the nurse said the facility only works in the evening.
- **The polyclinic in Sandabes** was disappointing it is located within the CDA which also has a nursery and a leather shop. The facility is not functioning, has no physician; the rooms are partially furnished but not to the minimum standard to provide care. There is a laboratory which is working in the clinic but on questioning, the lab is rented out to the (technician/doctor) and he runs it basically as a private lab. The lab has 2 female employees beside the technicians whom were interviewed as health care workers as they take blood samples when needed and talk to the patients who visit the lab and might be giving them health messages. We were not able to complete the doctor's interview as the facility is not working; the facility check list and all the required consents were completed.
- **The polyclinic in Karnafel** is located on the second floor in one of the local mosques. We were able to complete all required tools. The health workers interviewed were not nurses as the facility has no working nurses. The facility check list and doctor's interview were also completed. It is to be noted that accessibility to this facility is limited it is situated at the end of the village on a very narrow street that is broken down we were not able to proceed with the car, and had to move the last 100 meters on foot, if some infrastructure funds can be secured it would be of great help to them. The most positive thing I found in this place was that as stated by the administrative manager of the facility most people working here are volunteers or on minimum compensation.

Upper Egypt

5.4.3 Beni-Suef

a) Al-Fashn

- **The polyclinic in Ezbet Yakoub the village of Nazlet Hana** was promising, the facility is within the CDA which was built recently by a donation from EFG-Hermes, and it is well furnished and ready to work. The CDA management board was very cooperative, however, the facility is not functioning although well equipped there are no personnel to interview. The chairman of the CDA said they would love to have a full time physician in the facility. The village pharmacy is far from the facility and had no pharmacist during our visit as he is available only a few days and during night shifts.

b) Beni-Suef

- **The polyclinic in Ezbet El Kom El Ahmer** was completed successfully the clinic is not separate physically from the CDA but 2 rooms have been set aside for the clinic. Health workers interviews were completed with clinic personnel with no any medical background.

5.4.4 Asyut

a) Asyut

- **The polyclinic in Menqbad** the facility is located within the CDA. It is brand new and well furnished. A board member was briefly interviewed as and all tools were completed successfully.
- **The polyclinic in Bani Hussein** this facility is unique in that it is present within the CDA's building but is rented out to a physician who uses it as a private clinic. The physician is a retired MOHP employee. He refused to attend the training held by SMART in Asyut and when I interviewed him he seemed uninterested and only agreed to participate under the pressure of the CDA's board member.
- **The polyclinic in Awlad Ibrahim** is very modest that only one clinic with one physician is working there. She is a retired physician from Asyut who used to work in the primary health care facility in the village. There is only one room in the clinic poorly furnished but clean and only one worker with the physician who had no qualifications to interview. The facility works for 3 hours daily in the evening only.
- **The polyclinic in Almutea** is located in a separate building inside the village it is currently being used as a nursery we arrived at 2pm and the facility was closed but a CDA worker escorted us to it and opened it. The facility is not functioning as it has no physician or nurses.

b) EL Fateh

- **The polyclinic in Alwasta** the facility is located within the CDA, we had an opportunity to talk to the board of the CDA they said their biggest challenge was in finding a physician to work in the facility the last physician left about a year ago and since then it has not worked. The facility has a dental clinic only. The facility is not working there is no physician or nurse there were no health educators to interview we were only able to complete the facility checklist.
- **The polyclinic in Al Maasara** the facility is very modest. The doctor available is a fresh graduate from the village and works there to help the poor. When asked he stated that he gets 2-3 patients per day and usually they are too poor to pay when he is not available another doctor covers the clinic. The health worker available is a janitor/nurse, he can barely read and is also working there to help the community. Thus we were not able to complete any of the health worker surveys.

- **The polyclinic in Alakrad** was promising; the facility is within the CDA in the ground floor. We had an opportunity to talk to the board of the CDA and they seemed like dedicated people and very active. I was able to interview the doctor and complete one health worker survey.
- **The polyclinic in Arab Mtair** this is by far the poorest village we have visited in terms of infrastructure, transportation and conditions. The polyclinic had minimal furniture and equipment. The CDA board member I met was very helpful but said that they had no money to employ a physician.

5.4.5 Sohag

a) Sohag

- **The polyclinic at El-Salaa** was under establishment. The CDA chairman was highly committed to the polyclinic establishment, and managerially capable. He already recruited a general practitioner to prepare for clinic. A very proximate commercial pharmacy adds to the potential of the clinic. All applicable tools and consents were completed successfully.
- **The polyclinic at Gzeret Shandaweel** facility is located within the CDA premises. Currently it's operating as a once per week providing only dental services. Apart from a volunteering CDA clerk, no workers were associated with the clinic. The clerk indicated that they used to have a once per week antenatal clinic in 2010. He also highlighted the challenge of recruiting and retaining physicians. A proximate commercial pharmacy adds to the potential of the clinic. All applicable tools and consents were completed successfully.

b) Shandaweel

- **The polyclinic at Naga Abo Awad** was under construction. The CDA Management was committed. All applicable tools and consents were completed successfully.
- **The polyclinic at Shandaweel** used to include an antenatal clinic and a minor operations room. However, currently it's neglected and only operates as an occasional dental clinic. The Managing CDA is well established. It also owns a laboratory in Gzeret Shandaweel. The CDA chairman highlighted that physicians usually leave the clinic due to decreased flow, or after they finish their MoH "Takleef" Period. All applicable tools and consents were completed successfully.

5.4.6 Qena

a) Naqada

- **The polyclinic at Naqada** is a very promising polyclinic located within the CDA's premises. Currently it included a highly utilized laboratory, physiotherapy clinic, and occasionally an antenatal care clinic. A gynecologist was newly recruited to start working regularly in the antenatal clinic. Two delegated health workers were interviewed by our team. A proximate commercial pharmacy adds to the potential of the clinic. The CDA financial manager indicated that the retention of physicians had always been their major challenge. All applicable tools and consents were completed successfully.

- **The polyclinic at Khatara** is located within the CDA itself (2-delegated rooms). Currently it irregularly operates as a once per week chest clinic. A commercial pharmacy is located within the same building of the CDA, whose pharmacist was volunteering to help in running the clinic. No other health workers are working at the clinic. The CDA chairman passionately welcomed the project. He expressed his sincere hopes that the project could help him the overwhelming challenge of recruiting and retaining qualified physicians, which represent the true bottle neck in driving clinic utilization. He cited poverty as reason for lack of local community support of the clinic. All applicable tools and consents were completed successfully.

b) Hegaza

- **The polyclinic at Hegaza Bahery** is a delegated room within CDA itself. It had minimal furniture and was all filthy. CDA had an operating nursery and a once per-week antenatal clinic. The Physician running the clinic is a gynecologist, who used to run the clinic for more than 12 years. The CDA chairman on the other side was very vocal in his hopes that the project could help him restore his CDA; he also expressed his concerns about the safety of the village drinking water. All applicable tools and consents were completed successfully.
- **The polyclinic at Hegaza Qbly** was by far the most impressive clinic visited. The CDA management delegation to clinics needs, and capacities are exceptional. The clinic is located proximate to the CDA and includes an antenatal and pediatric examination rooms. Currently it's only operating as a once per-week antenatal clinic. It shares the same physician with Hegaza Bahery, who expressed here sincere appreciation for the CDA's responsiveness to clinic needs. Mrs. Hoda the CDA chairman was herself part of several female empowerment programs. We found her to be a sincere community leader. She expressed her hopes that SMART program could build their CDA management capacity to better response to changing community needs. She also expressed here deep concerns about the safety of the village's drinking water. All applicable tools and consents were completed successfully.

6. BASELINE SURVEY CONCLUSION

This extensive research covered different target groups in the selected governorates with different methodologies. The quantitative paper was focusing on exploring the belief, knowledge and practices of couples for healthy living. In the qualitative part mothers in law were included and all the questions to the participants followed the same guidelines trying to explain the findings of the quantitative research. In addition to that both quantitative checklist assessment and qualitative interviews were conducted with the health providers of the community health facilities provide such services.

6.1 BACKGROUND CHARACTERISTICS

The selected sample is covering the communities with low socioeconomic status located in the rural areas of Egypt. It's noticed that high percentage of the women are not educated. 26% of the women over 35 years old were not educated and 22.1% received primary education or some education. In total, only half of the women completed 11 years of education. The sample in the whole document is representative for the selected areas within their contexts and we can't generalize it for the situation in Egypt. However, it represents the low families who undeserved in these governorates.

6.2 CONTRACEPTION

The lack of education was reflected in the level of knowledge about health risks associated with pregnancy. The qualitative interviews showed that women have knowledge about the health risks of pregnancy but they can't mention all the dangerous signs. Women showed better knowledge in the intervention group in Lower Egypt than in Upper Egypt with regards to the health risks associated with close pregnancy, mentioning the mother's anemia followed the low-birth weight of the newborn as the main risks. On the other hand the knowledge about contraception of the whole sample was acceptable that 99.5% of the women know at least one method mainly IUD (92%) followed by pills and injections; with very little knowledge about traditional methods. This finding was confirmed in the qualitative research. The knowledge of women about more methods of contraceptives was more associated with the age of the women while difference in education wasn't significantly different. During interviewing the mothers in law; they showed more knowledge about the contraceptive methods compared to the mothers. In terms of practice; 70% of all women are currently using contraceptives (modern methods). Age and education are both associated with more use of contraceptives. The other reasons raised in the qualitative interviews were the need to care of the mothers' health and financial cost of raising a child. It was noticed that that women in the intervention group in Upper Egypt use contraceptives (64.8%) less than in Lower Egypt (76.6%). The decision of using contraceptives is a joint decision in 75.8% of all cases. Women in the intervention group in Lower Egypt have relatively more share of the decision with 20.6% compared to 19.4% in Upper Egypt. The same results were reported from the qualitative interviews; however men though they have more influence of such decision while it's not practiced through the quantitative results.

6.3 ANTENATAL CARE

In terms of antenatal care, it's obvious that women are aware of the importance of ANC since 99.2% of them had ANC visits during their last pregnancy. In Upper Egypt, percent of women seeking ANC from public sector in intervention districts was significantly greater than those in control districts; the

situation is reversed in Lower Egypt. More than three quarters (77.4%) of all women emphasized on having four antenatal visits or more; the number of ANC visits is more correlated with better education. The first ANC visit occurred before the fourth month of pregnancy in 77.1% of all cases. In the interviews there was discrepancy between the ideal number of ANC visits between fathers, mothers and mothers in law. Mothers reported higher ideal number of visits compared to men and mothers in law. In terms of practice the reported visits in the qualitative part were associated with medical complication rather than following the routine schedule of the ANC visits. Women in control districts (79.0% in Upper Egypt and 78.6% in Lower Egypt) are more likely to have their antenatal checkup earlier (before the fourth month of pregnancy) compared with women in intervention districts (74.6% in Upper Egypt and 76.3% in Lower Egypt). It is worth to mention that women of age 20-24 (81.5%) and completed some secondary education or more (82.2%) tend to have their checkup earlier compared with other women. During the antenatal period around 71% of all women took iron tablets or syrup, only one third of the women took at least 90 iron tablets during their pregnancy period and about 40.6% received two or more TT injections during pregnancy. It was found that the higher the education level, the more likely women tend to take iron tablets and receive TT injections. The interviewees should that women take iron tablets following the physician orders but they are not usually aware of the importance of iron tablets and couldn't identify the ideal dose. The mothers in law were more knowledgeable and fathers confirmed the importance of taking iron tablets.

In terms of services provided during ANC; the vast majority of women (83.3%) had their blood pressure measured, followed by those who had blood and urine samples taken. About 58.8% of women were counseled on breastfeeding and about half of them were counseled on child spacing. Women over 35 years old reported receiving less counseling on different components of counseling specially breastfeeding and child spacing as well as less services and medical care provided like weighting. These relatively good results can be clarified during the interviews that respondents reported more counting on private health sector which provide good services but no proper counseling. The PHUs and general hospital don't provide quality services but provide cheap services with some counseling. It shows that proper counseling is not provided by any service that women seek for delivery. When the mothers asked about their knowledge of complications during pregnancy, 10.2% of the whole sample stated that they don't know about any complications. Among those who have knowledge with these complications, slightly above half (53.7%) stated that woman may suffer from vaginal bleeding during pregnancy, representing the highest cited complication; this was followed by severe abdominal pain (41.7%) and Preeclampsia and Eclampsia (23.9%). The mothers in law showed even better knowledge about pregnancy complication and they reported constant help to their daughters during pregnancy and delivery. Fathers were always willing to take the mother for medical consultation in such incidents.

6.4 DELIVERY CARE

Private sector is the main delivery place in Egypt with 54.7% followed by general hospitals with 30.8%, 85.8% of these deliveries were assisted by a doctor. Less women tend to deliver at home (11.7%) or using primary healthcare units (2.2%). 45.5% of the women in Upper Egypt delivered last baby in the hospitals compared to 21.2% delivered in the hospitals in Lower Egypt. However, this situation might not last for long as many women from Upper Egypt during the interviews reported negative experiences in the public hospitals and even with financial constrains to pay for private system for delivery fathers and mothers are willing to borrow money to have delivery in private systems in the next times. In Upper Egypt, women in intervention districts (45.5%) were more likely

to deliver at hospitals compared with those in control districts (29.7%) and less likely to deliver at a private facility (39.0%) compared with those in control districts (56.7%). The reversed case is in Lower Egypt,

Almost half (48.5%) of the decisions of the delivery places were made by the husband for all women. Women with no education and no ANC visits tend to stick to their husbands decision more than other women. The factors influencing the choice of the place of the delivery were mainly the level of the care provided during the ANC (47.9%) followed by the opinions of trusted doctors (18.9%) and financial considerations (18.9%). The decision of delivery was clearly reported in the FGDs as multi factorial decision which affected by all the previous factors with different weights. Women and men in the interviews considered it joint decision more than man decision. About one fifth of all women in the sample didn't know about the complications women may encounter during delivery. Among those who know, heavy bleeding was the highest cited complication (51.8%), followed by high fever (26.1%) and water breaking (25.7%).

6.5 POSTNATAL CARE

28% of women confirmed receiving a second postnatal checkup during hours from delivery. About 34.6% of women did not receive any postnatal visit. 13.8% of all women stated they don't know any of the complications women may encounter after delivery. Primary Health units offered some counseling in some areas but the majority of respondents in the qualitative interviews didn't recognize the value and the expectations of postnatal complications. Among women with knowledge, severe abdominal pain and excessive vaginal bleeding were the highest cited complications, 45.0% and 44.6% respectively. This was followed by high fever (37.5%). It was found that age, education, work status and place of delivery affect the knowledge about post delivery complications. The more the age increases, the more aware the women are concerning the knowledge of post delivery. This was confirmed with higher knowledge among the mothers in law during the interviews. About one fifth of women of age less than 20 do not know any of these complications. On the other hand, women who delivered at a public facility were the ones having the highest level of knowledge compared with those who delivered at private facilities, hospitals, or home. This can be explained with offering some counseling in the public system compared to private system or it can be correlated with the negative experiences women faced in public hospitals. Women that do not work at all usually have the least knowledge compared with those who work.

In terms of services, only one fifth of all women confirmed receiving injections after delivery to prevent bleeding too much, while 56.5% assured on having a manual removal of placenta and 47.7% assured on having their uterus massaged for contractions. Approximately 67% of all women confirmed receiving their first postnatal checkup after hours from delivery with the majority of conducted by a doctor. Only 10.8% of women did not have any postnatal care. No major difference was observed between women of different ages and of different education levels. Women delivered at hospitals or homes were more likely to have manual removal of placenta (63.0% and 66.2%, respectively) and uterus massage for contractions (51.5% and 58.9% respectively) compared with those delivered at public or private facility, with public facilities having the least levels (47.8% and 39.3%, respectively). In the interviews women reported that physician are generally busy with serving many people. Women who deliver at home usually count on midwives who have more time and space to explain to the mothers about topics like uterus massage and placenta removal.

The vast majority of all women (81.3%) do not know the instrument used in cutting the umbilical cord, and only 13.6% confirmed using brand new instruments. Women with some secondary education or more were more likely not to know what instrument was used in cutting the umbilical

cord (84.0%), compared with those with no education (76.6%) and those with primary or some primary education (76.2%).

6.6 CHILD HEALTH

Among children ill with ARI symptoms, data show that 31.8% of children suffered from the symptoms of ARI during the two-week period prior to the survey and 44.2% among them were given medical treatment by a health provider. The interviewees in the qualitative part reported seeking advice of the pharmacist or friend before heading to physicians in severe cases. The respondents in the qualitative interviews couldn't differentiate between common flu and pneumonia. Those who were most likely to receive medical care included the children of age 6 – 23 months (about 49%), children in intervention districts in Upper Egypt (54.9%), and children whose mother had primary or some primary education (54.8%). About half of children (50.3%) were reported as having had diarrhea in the two week period prior to the survey. Among children with diarrhea, about 41.7% were breastfed as usual, 40.9% were breastfed less than usual, 34.9% offered more fluids than usual, and 43.4% offered more food than usual. Children less than six months old receive more or usual breastfeeding when it comes to diarrhea. The misconception about less breastfeeding during diarrhea is more common in Upper Egypt as confirmed by the focus group discussions. This misconception was more common among fathers in the focus group discussion. It was noticed that children of age 12-23 months were way more likely to be offered less food than usual (51.1%) compared with younger children, especially those of age under 6 months (25.2%). The reason for diarrhea was mainly contamination and reasons for RTI were flu and exposure to smoke. However, the mothers reported difficulty to stop such exposing factors for diarrhea and RTI. 56.8% of children with diarrhea in the last two weeks were given appropriate care. Children with age >11 months are more likely than other children to receive appropriate diarrhea care. There are no gender differences in terms of care of sick child with diarrhea or RTI. Children with diarrhea in intervention districts in Upper Egypt are significantly more likely to be breastfed as usual (44.9%) than those in control districts (38.6%), while those in control districts in Lower Egypt are significantly more likely to be breastfed less than usual (47.6%) than those in intervention districts (36.7%). No significant difference was found in Lower Egypt.

Overall, 91.3% of all respondents wash their hands before food preparation, 85.9% wash their hands before feeding children, and 79.8% wash their hands after defecation. This was found associated with the education and the age of the mother. In lower Egypt It was noticed that women in control districts are remarkably more likely to wash their hands before food preparation (92.9%), before feeding children (86.9%), and after defecation (83.8%), compared with those in intervention districts; 85.8%, 79.6%, and 72.8%, respectively.

6.7 BREASTFEEDING PRACTICES AND NUTRITION STATUS

Regarding the nutritional status and growth of the children, data showed that 5.3% of children are severely stunted, 11.4% are stunted, 3.2% are severely wasted, 9.8% are wasted, 1.6% are severely underweight, and 8.1% are underweight. The women considered the financial situation is mainly responsible for their inability to provide health food to their children. Items like egg and milk were mentioned as part of the ideal meal but no one could afford it on regular basis.

6.8 WORKING STATUS OF WOMEN AND DECISION MAKING

The vast majority of women (87.9%) stated that they are not working outside. The percentage of working women is higher among older generation more than 35 years old. Regarding making the decisions inside the house, data showed that in Upper and Lower Egypt, the decision in control districts is more likely to be taken jointly by the husband and wife (31.6% in Upper Egypt and 43.0% in Lower Egypt) than in intervention districts (23.1% in Upper Egypt and 32.6% in Lower Egypt). In the qualitative part every partner claimed more roles in decision making after joint decisions. On the other hand fathers considered that women are the main person responsible for taking care of the children. The debates were about decision like using contraceptives and place of delivery.

6.9 MEN

6.9.1 Exposure to Media Messages About Family Planning

Men were asked about their exposure to media messages about family planning, results showed that television is the main source of information (96.5%), followed by the radio (33.3%) being listened to more in lower Egypt than in upper Egypt, then newspaper (25.9%). 98.4% of men confirmed their hearing about family planning methods, mostly pills (97.6%), IUD (95.8%), and injectables (93.6%) with much less knowledge about traditional methods. Men were less knowledgeable than women and mother in laws in qualitative interviews. They tried to leave the decision to the professionals and the mother themselves.

6.9.2 Role of Men During pregnancy

The men tend to have fewer roles during the pregnancy times while the role of the mothers maximized according to the interviews. Concerning the role of men during pregnancy, in Upper Egypt, men are more likely to have their children been delivered at a hospital than in Lower Egypt, the case is reversed with regards to the ANC visits the mother had during pregnancy and the fact of having more husbands accompanying their wives to the doctor during such ANC visits in Lower Egypt.

In Upper Egypt, men in intervention districts are more likely to have their children been delivered at a hospital (80.9%) than those in control districts (70.9%), and to be with their wives during ANC visits (63.0%) than those in control districts (59.2%). In Lower Egypt, the only difference between men in control and intervention districts is that men in intervention districts are highly more likely to be with their wives during ANC visits (96.0%) than those in control districts (70.2%). Men in control districts are more likely to know about male condom (69.8%), LAM (58.5%), and withdrawal (47.0%) than those in intervention districts; 61.5%, 49.7%, and 42.0%, respectively.

6.9.3 Knowledge of Dealing with Sick Child

When asked about their opinion about the quantity of liquids that should be given to the child during diarrhea, 45.0% of the men did not know, 25.1% think child should be given more liquid than usual, and 19.6% think that child should be given same amount of liquid as usual. Fathers and others in law were referring to the mothers as main caregiver in the interviews. The fathers have limited knowledge about dealing with diarrhea and nutrition of the child in all stages. No significant difference was noticed among men's opinion in Upper Egypt, however, in Lower Egypt, men in control districts

were found less aware of the appropriate amount of liquid that should be given to the child during diarrhea compared with those in intervention districts.

